



**Dual Band FM Transceiver
BJ-9900**

SERVICE MANUAL

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INTRODUCTION

Scope of this manual

This manual provides necessary technical information for the maintenance and inspection of mobile radio BJ-9900. Maintaining this device needs professional knowledge of the operation of surface chips assemble. Non-professional operation will lead to permanently damages other than quality assurance, and even in some countries it may be illegal.

This manual is generally correct and complete, but Baojie will not bears any responsibility for the damages caused by typographical or other errors. If any technical information discrepancies are found , please note that we will be very grateful.

Baojie reserve explanation rights. Meanwhile ,Baojie company will remain the right of changing product designs and specifications

Personal Security

- ⌚ For personal safety, please note the following tips:
- ⌚ Do not transmit before all the RF plugs are carefully confirmed or any open plug have not be connect to the matching port.
- ⌚ Turn off the power and do not operate this equipment when near the the electric squib or near flammable gas .
- ⌚ To avoid electromagnetic interference or problems caused by the battery compatibility, please turn off the radio where there are marks " NO RADIO",such as hospitals and other health care place

CIRCUIT DESCRIPTION

Receiver signal channel

Main band 430MHZ Signal

430MHz signal transmits to Antenna through a high pass filter network, and a low pass filter network switching diode D1029,D1030{ }and }D1001, then transmit to Main band RF amplifier Q1001 through another low pass filter network.

Amplified 430MHz signal transmits to Tuned vibration variable resistance filter network through the switch D1002,which include D1004.D1005 ,D1006 and related circuit. and then it transmits to the first mixer Q1003.Meanwhile UHF local oscillator signal which comes from UHF-VCO/BQ1116 transmit to the first mixer Q1003 and generate first IF of 38.55MHz main band.

Main band 144 MHz signal

144MHz signal transmits to Antenna through a high pass filter network, and a low pass filter network switching diode D1113,D1114,D1115, D1116 and D1117 then transmit to Main band RF amplifier Q1014 through another low pass filter network.Amplified 144MHz signal transmits to first mixer Q1016 through Tuned vibration variable resistance filter network th including D1017.D1005 ,D1006 and related circuit.

Meanwhile VHF local oscillator signal which comes from VHF-VCO/BQ1120 transmit to the first mixer Q1016 and generate first IF of 38.55MHz main band .

Main band IF and audio signal

38.55MHz main band first IF signal is sent to the crystal filter FL1001 and FL1002. The crystal filter to remove those unwanted mixer products, and then sent to the IF amplifier Q1027 IF IC IC1044.

Meanwhile the 13MHz Crystal part X1002 export the triple frequency via Q1042 to generate 39MHz second local oscillator signal and transmit to IF IC1044 where 39MHz second LO and 38.55MHz Main band first LO mixed to be 450KHz Main band second IF.

450KHz main band second IF through the filter switch D1039/D1041 transmit to Ceramic Filter which remove the other signal except the useful and then transmit to ceramic discriminator CD1001 via the IF amplifier in IC1044. The ceramic discriminator will remove any Variance in Amplitude in 450KHz IF signal before voice detecting .

Demodulated Main band audio restore the network band networking and audio switch through signal, and then handle by audio processor IC1042. And the filtered audio signal transmit to audio switch IC1066 and IC1067.

When the built-in speaker is selected, the audio signal will be amplified by IC1069 and then be provided to the built-in speaker. When the external speaker is selected, the audio signal will be amplified by IC1068 and then transmit through the external speaker jack to the external speaker.

sub-band 430MHz signal

430MHz signal transmits to Antenna through a high pass filter network, and a low pass filter network switching diode D1029,D1030{ }and }D1001, then transmit to sub-band

RF amplifier Q1002 through another low pass filter network.

Amplified 430MHz signal transmits to Tuned vibration variable resistance filter network through the switch D1009,which include D1011.D1012 ,D1013 and related circuit. and then it transmits to the first mixer Q1005.Meanwhile UHF local oscillator signal which comes from UHF-VCO/AQ1123 transmit to the first mixer Q1003 and generate first IF of 49.95MHz Sub-band

Sub-band 144MHz Signal

144MHz signal transmits to Antenna through a high pass filter network, and a low pass filter network switching diode D1113,D1114,D1115, D1116 and D1117 then transmit to Main band RF amplifier Q1015 through another low pass filter network.Amplified 144MHz signal transmits to first mixer Q1017 through Tuned vibration variable resistance filter network including D1020.D1021 ,D1022 and related circuit.

Meanwhile VHF local oscillator signal which comes from VHF-VCO/AQ 1126 transmit to the first mixer Q1017 and generate first IF of 49.95MHz sub-band .

Sub-band IF and audio signal

49.95MHz sub-band first IF signal is sent to the crystal filter FL1003 and FL1004. The crystal filter remove those unwanted mixer products, and then through the IF amplifier Q1035 sent to IF IC IC1047.

Meanwhile the 16.8MHz Crystal part X1003export the triple frequency via Q1043 to generate 50.4MHz second local oscillator signal and transmits to IF IC1047 where 50.4MHz second LO and 49.95MHz sub-band first signal mixed to be 450KHz sub-band second IF.

{450KHz sub-band second IF transmit to Ceramic Filter CF1003 which remove the

other signal except the useful and then transmit to ceramic discriminator CD1001 via the IF amplifier in IC1047. The ceramic discriminator will remove any Variance in Amplitude in 450KHz IF signal before voice detecting .The ceramic discriminator will remove any Variance in Amplitude in 450KHz IF signal before voice detecting .

Demodulated sub-band audio restore the network and audio switch D1048 through signal, and then handle by audio processor IC IC1043. And the filtered audio signal transmit to audio switch IC1066 and IC1067.

When the built-in speaker is selected, the audio signal will be amplified by IC1069 and then be provided to the built-in speaker. When the external speaker is selected, the audio signal will be amplified by IC1068 and then transmit through the external speaker jack to the external speaker.

Squelch control

Main band

when there is not receivable carrier signal in main band , the output noises for the IC1044 detector will be amplified while the band pass will be filtered by the IC1044's noises amplified part. The generated direct voltage will be transferred to of Main CPU IC1104 pin31 which will compare the squelch standard level with the settable squelch level in the front panel which can setted through SQL key.

when there is no receivable carrier signal in main band , The pin76 in IC110 will keep in LOW position to forbidden the audio output of the speaker.

Sub-band

when there is not receivable carrier signal in sub-band , the output noises for the IC1047 detector will be amplified while the band pass will be filtered by the IC1047's noises amplified part. The generated direct voltage will be transferred to of Main CPU IC1107 pin28 which will compare the squelch standard level with the settable squelch level in the front panel which can setted through SQL key.

Transmitter signal channel

Audio signal

The audio signal which arrive at loud-speaker are transferred to the audio amplifier U3001 of PANEL-SUB UNIT through the Mic Plug J3004.The amplified audio signal via the front panel separated plug J3002 and J1005 transmit to TX-RX unit where the audio signal is transferred to the audio processor IC IC1042 and related circuit.

430 MHz signal

The audio signal which arrives at IC1042 are transferred to variable resistance diode through transistor exchanger Q1114 and Q1115.Where the frequency modulates composed and emission voltage controlled oscillator which compose of UHF-VCO/B Q1116 and D1081.

Adjusted transmitting signal through a buffer amplifier Q1117, Q1118, Q1119 and diode switch D1099, D1101 sent to the preamplifier Q1132.

Amplified transmitting signal reaching Q1132 transmit to diode switch D1107 through the diode switch D1106 and drive amplifier, and finally be amplified by power amplifier Q1135 to generate more than 35W output power .These three steps are controlled by auto power control circuit.

35W RF signal through a high pass filter network transmit to the antenna switch D1118, D1119 and D1120, and then through a low pass filter network, and another high-pass filter network transmits to the antenna jack.

144 MHz signal

The audio signal which arrives at IC1042 are transferred to variable capacitance diode D1082 and D1085 through transistor exchanger Q1114 and Q1115.

Amplified transmitting signal reaching Q1132 transmit to diode switch D1108 through the diode switch D1105, D1106 and drive amplifier, and finally be amplified by power amplifier Q1135 to generate more than 50W output power .

Q1132 come to be amplified transmission signal via a diode switch D1105, D1106, and sent to the diode drive amplifier switch Q1134 D1108, Q1135 ultimately amplified by the power amplifier, resulting in more than 50W of output power. These three steps are controlled by automatic power control circuit.

50W RF signal through a high pass filter network transmit to the antenna switch D1113, D1114 and then through a low pass filter network, and another high-pass filter network transmits to the antenna jack.

Automatic power control circuit

430 MHz signal

Part of the output of the power amplifier corrected by the D1121 and D1122, Then sent to the APC Automatic Power Control IC1129. As a DC voltage, APC Automatic Power Control of the power amplifier output level is proportional to.

In IC1129 on, come to the power amplifier and the DC voltage correction over to the main CPU IC1104 to the reference voltage to produce a control voltage. The control voltage regulated power supply voltage to the preamplifier Q1132, Q1134 driver amplifier and power amplifier Q1135, in the case of changing the antenna load to maintain a stable output power.

144 MHz signal

Part of the output of the power amplifier corrected by the D1109 and D1110, and then sent to the APC Automatic Power Control Q1129. As a DC voltage, APC Automatic Power Control of the power amplifier is proportional to the output level.

On the Q1129 to correct over to the power amplifier to the DC voltage to the main CPU IC1104 with the reference voltage to produce a control voltage. The control voltage regulated power supply voltage to the pre-amplifier Q1132, Q1134 driver amplifier and power amplifier Q1135, in the case of changing the antenna load to maintain a stable output voltage.

PTT Electric circuit

430 MHz signal

When you press the PTT switch, the sub CPU U2001's pin 23 to the "low" position,

then launch "PTT" command to the main CPU IC1104.

When the "PTT" command is received, the main CPU IC1104 pin 45 to the "high" position, then activates the UHF transmitter switch Q1096.

When the Q1096's UHF transmitter switch is activated, it controls the antenna switching diode D1118, D1119, D1120, modulation switching diode Q1114, Q1115, diode switch D1099, D1101, D1106, D1107, and APC automatic power switch Q1130, Q1131. These activated the 430 MHz transmitter circuit.

144 MHz Signal

When you press the PTT switch, the sub CPU U2001's pin 23 to the "low" position, then will launch the "PTT" command to the main CPU IC1104.

When the "PTT" command is received, the main CPU IC1104 pin 46 to the "high" position, then activates a VHF transmitter switch Q1096.

When Q1096 for VHF transmitter switch is activated, it controls the antenna switching diode D1118, D1119, D1120, modulation switching diode Q1114, Q1115, diode switch D1099, D1101, D1106, D1107, and APC automatic power switch Q1130, Q1131. These activated the 144 MHz transmitter circuit.

PLL Electric circuit

Main band

Come to UHF-VCO / B Q1116 part of the output buffer amplifier Q1117 and through diode switch D1086, sent to the PLL IC1109 programmable divider. Here it is according to the main CPU IC1104 related to the frequency division data is divided and sent to the

phase comparator.

Come to the VHF-VCO / B Q1120 part of the output buffer amplifier Q1121 and through diode switch D1087, sent to the PLL IC1109 programmable divider. Here it is according to the main CPU IC1104 related to the frequency division data is divided and sent to the phase comparator.

13 MHz reference oscillator X1003 frequency components via IC1109 2340 or 1872 in the reference divider is separated to form a 5 kHz or 6.25 kHz reference frequency compared these baseline frequency will be utilized by the phase comparator.

IC1109 phase comparator circuit of the voltage controlled oscillator and the oscillation frequency of the frequency of the phase comparison between the frequency comparison. Its output is a pulse with the same phase. The pulse by controlling the voltage in the loop filter are integrated to control the oscillation frequency of the VCO.

Sub-band

Come to UHF-VCO / A Q1123 part of the output buffer amplifier Q1124 and through diode switch D1093, sent to the PLL IC1112 programmable divider. Here it is according to the main CPU IC1104 related to the frequency division data is divided and sent to the phase comparator.

Come to the VHF-VCO / A Q1126 part of the output buffer amplifier Q1127 and through diode switch D1097, sent to the PLL IC1112 programmable divider. Here it is according to the main CPU IC1104 related to the frequency division data is divided and sent to the phase comparator.

16.8 MHz reference oscillator X1003 frequency components via IC1112 2340 or 1872

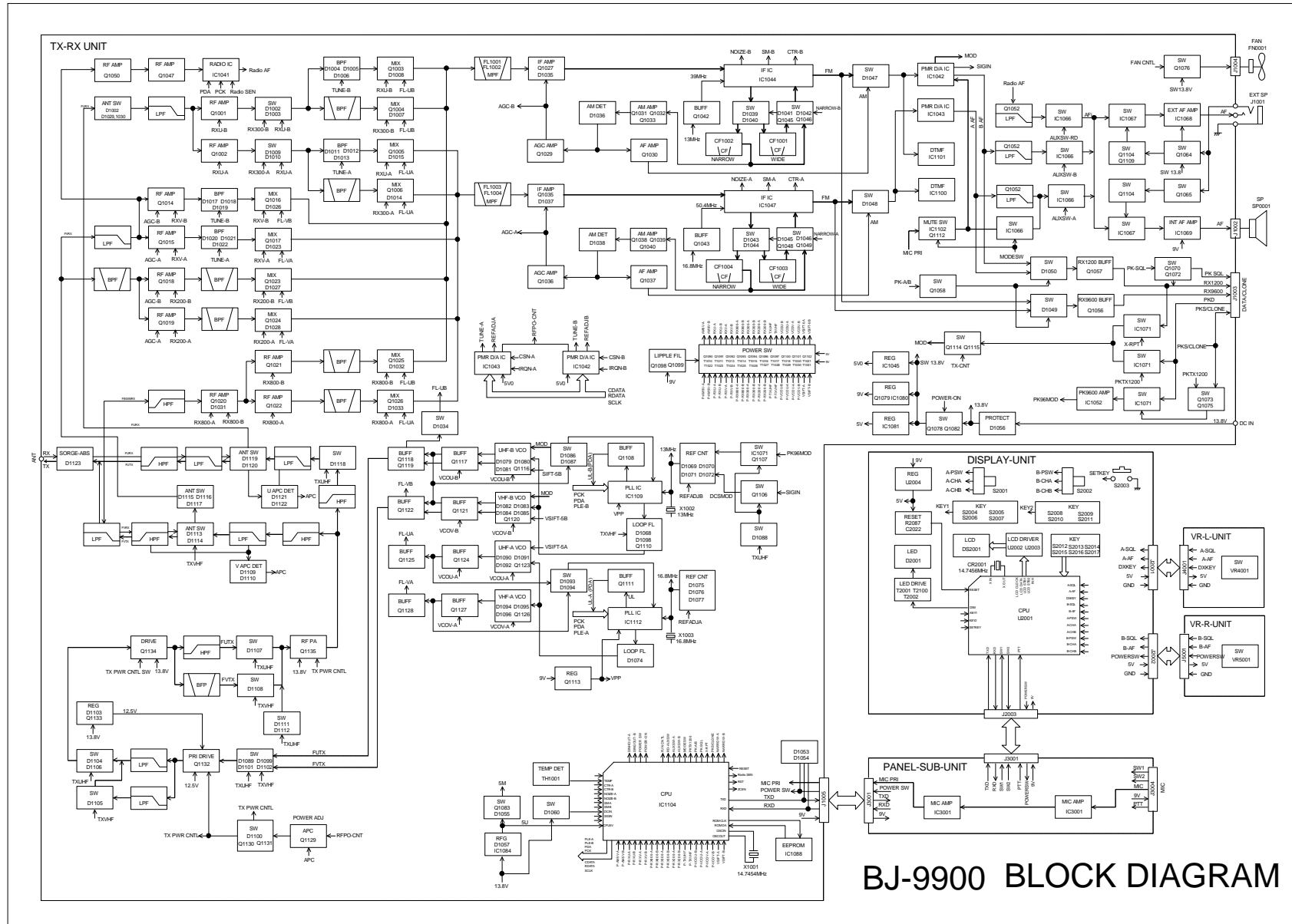
in the reference divider is separated to form 5 kHz or 6.25 kHz reference frequency compared these baseline frequency will be utilized by the phase comparator. .

IC1112 phase comparator circuit of the voltage controlled oscillator and the oscillation frequency of the frequency of the phase comparison between the frequency comparison. Its output is a pulse with the same phase. The pulse by controlling the voltage in the loop filter are integrated to control the oscillation frequency of the VCO. .

Power control

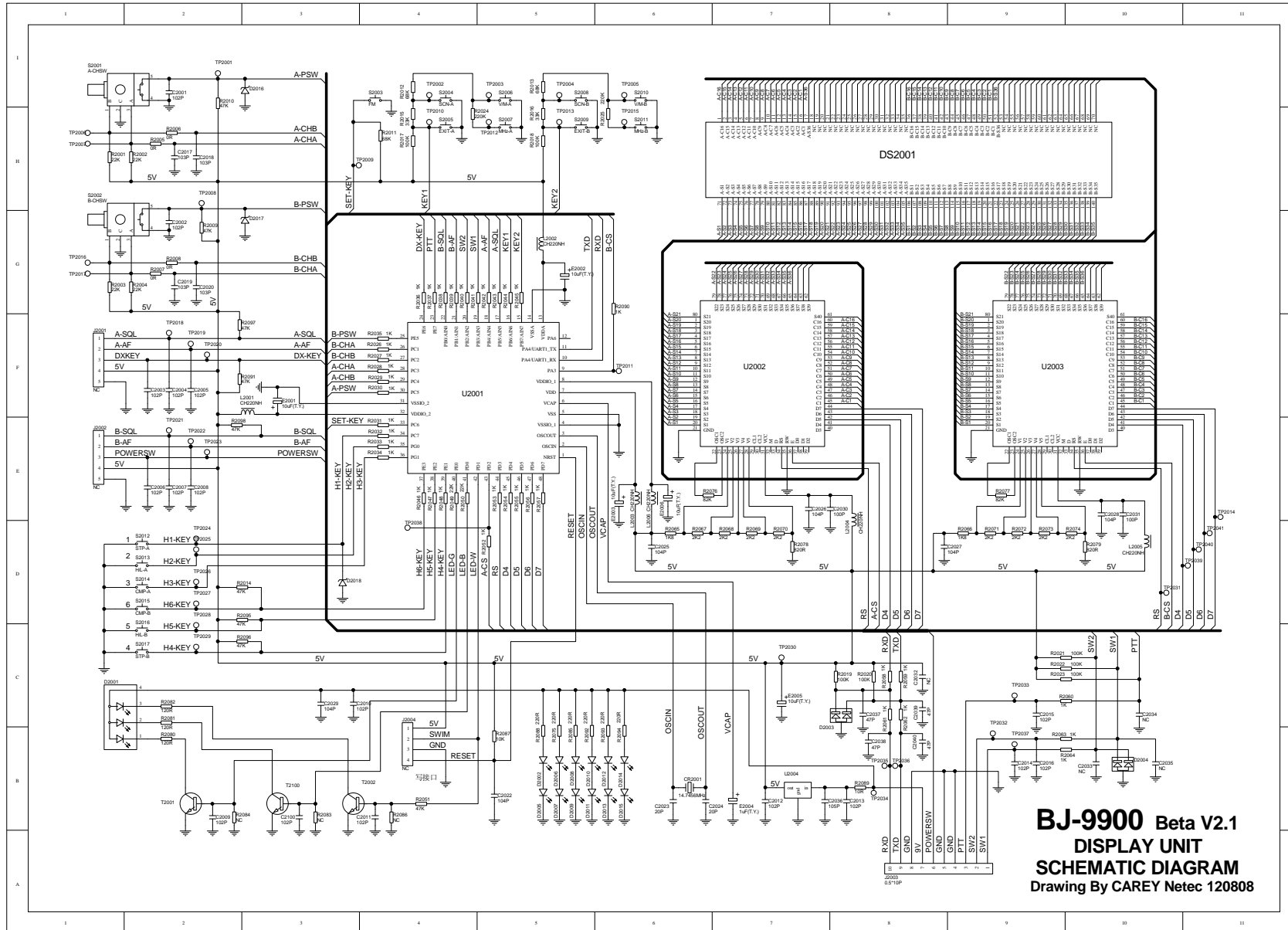
When the user holds down the right volume button for 2 seconds, the main CPU IC1104 of pin65 to the "low" position, the main CPU IC1104 of pin66 Go to the "high" position, then it activates the power switch Q1078 and Q1082, in order to provide 13.8 V DC to the transceiver circuitry inside.

BLOCK DIAGRAM

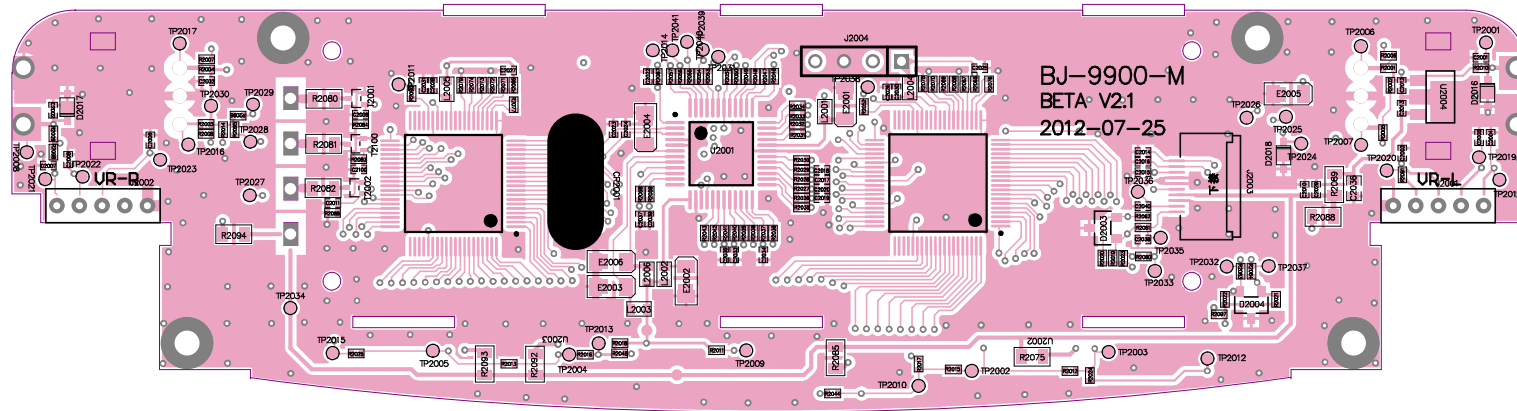
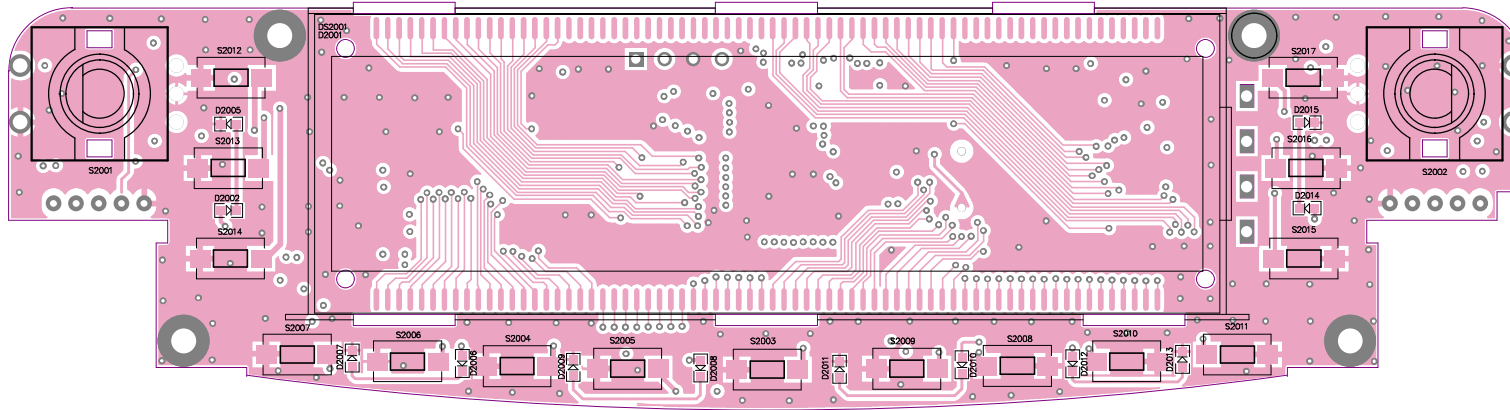


BJ-9900 BLOCK DIAGRAM

Display Unit Schematics:



DISPLAY UNIT LAYOUTS:



Display unit Parts List:

Designators	Name	Comment
C2001	Capacitor	102P
C2002	Capacitor	102P
C2003	Capacitor	102P
C2004	Capacitor	102P
C2005	Capacitor	102P
C2006	Capacitor	102P
C2007	Capacitor	102P
C2008	Capacitor	102P
C2009	Capacitor	102P
C2010	Capacitor	102P
C2011	Capacitor	102P
C2012	Capacitor	102P
C2013	Capacitor	102P
C2014	Capacitor	102P
C2015	Capacitor	102P
C2016	Capacitor	102P
C2017	Capacitor	103P
C2018	Capacitor	103P
C2019	Capacitor	103P
C2020	Capacitor	103P
C2022	Capacitor	104P
C2023	Capacitor	20P
C2024	Capacitor	20P
C2025	Capacitor	104P
C2026	Capacitor	104P
C2027	Capacitor	104P
C2028	Capacitor	104P
C2029	Capacitor	104P
C2030	Capacitor	100P
C2031	Capacitor	100P
C2036	Capacitor	105P
C2037	Capacitor	47P
C2038	Capacitor	47P
C2039	Capacitor	47P
C2040	Capacitor	47P
C2100	Capacitor	102P

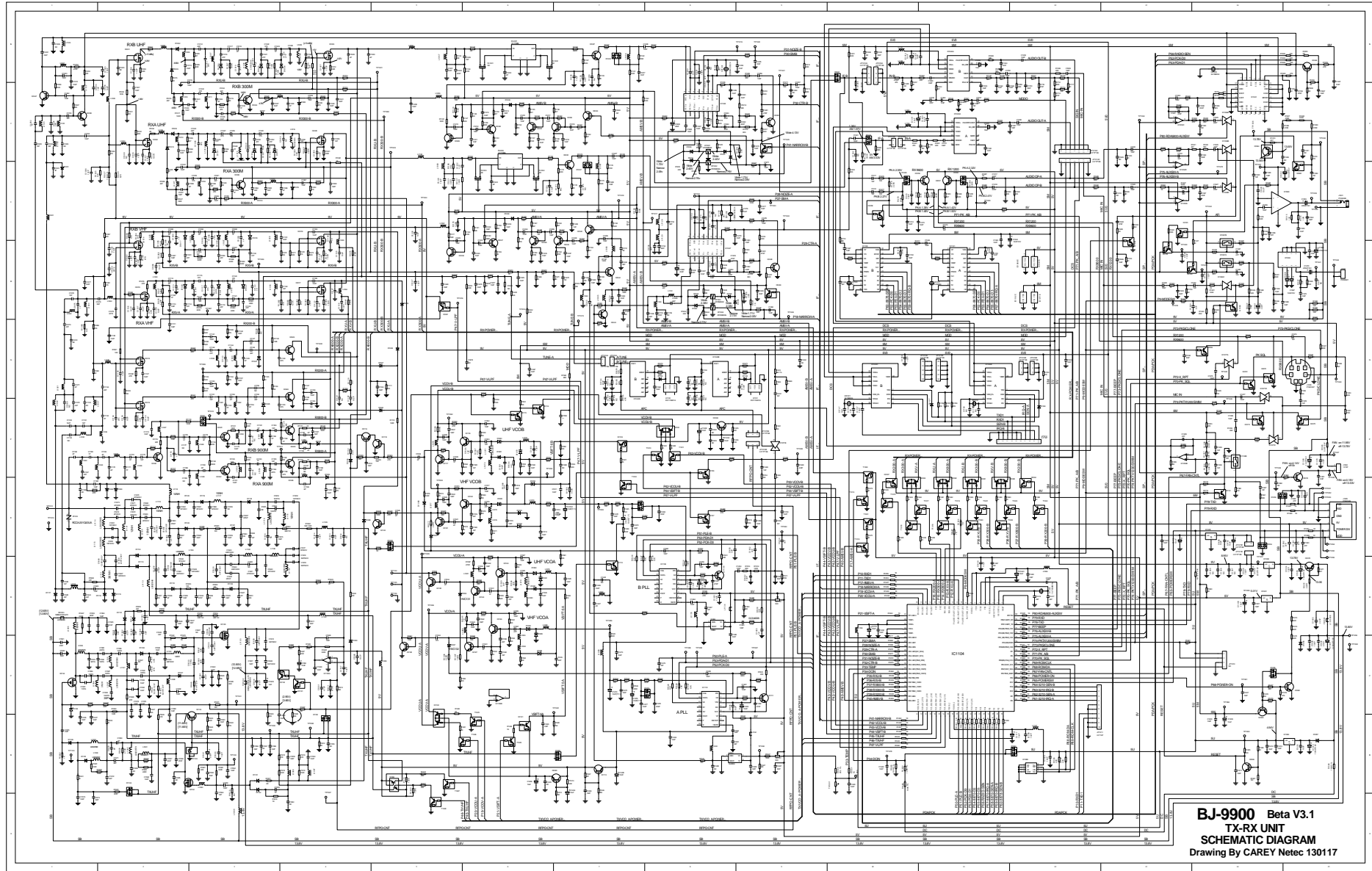
CR2001	Crystal	14.7456MHz
D2001	LCD BACKLIT	
D2002	LED	White
D2003	Diode	HZM27WA
D2004	Diode	HZM27WA
D2005	LED	White
D2006	LED	White
D2007	LED	White
D2008	LED	White
D2009	LED	White
D2010	LED	White
D2011	LED	White
D2012	LED	White
D2013	LED	White
D2014	LED	White
D2015	LED	White
DS2001	LCD	
E2001	Capacitor TAN.	10uF(T.Y.)
E2002	Capacitor TAN.	10uF(T.Y.)
E2003	Capacitor TAN.	10uF(T.Y.)
E2004	Capacitor TAN.	1uF(T.Y.)
E2005	Capacitor TAN.	10uF(T.Y.)
E2006	Capacitor TAN.	10uF(T.Y.)
J2003	PIN ASSY	0.5*10P
L2001	Inductor	Ceramic
L2002	Inductor	Ceramic
L2003	Inductor	Ceramic
L2004	Inductor	Ceramic
L2005	Inductor	Ceramic
L2006	Inductor	Ceramic
R2001	Resistor	22K
R2002	Resistor	22K
R2003	Resistor	22K
R2004	Resistor	22K
R2005	Resistor	0R
R2006	Resistor	0R
R2007	Resistor	0R
R2008	Resistor	0R

R2009	Resistor	47K
R2010	Resistor	47K
R2011	Resistor	68K
R2012	Resistor	68K
R2013	Resistor	68K
R2014	Resistor	47K
R2015	Resistor	33K
R2016	Resistor	33K
R2017	Resistor	100K
R2018	Resistor	100K
R2019	Resistor	100K
R2020	Resistor	100K
R2021	Resistor	100K
R2022	Resistor	100K
R2023	Resistor	100K
R2024	Resistor	220K
R2025	Resistor	220K
R2026	Resistor	1K
R2027	Resistor	1K
R2028	Resistor	1K
R2029	Resistor	1K
R2030	Resistor	1K
R2031	Resistor	1K
R2032	Resistor	1K
R2033	Resistor	1K
R2034	Resistor	1K
R2035	Resistor	1K
R2036	Resistor	1K
R2037	Resistor	1K
R2038	Resistor	1K
R2039	Resistor	1K
R2040	Resistor	1K
R2041	Resistor	1K
R2042	Resistor	1K
R2043	Resistor	1K
R2044	Resistor	1K
R2045	Resistor	1K
R2046	Resistor	1K

R2047	Resistor	1K
R2048	Resistor	1K
R2049	Resistor	22K
R2050	Resistor	22K
R2051	Resistor	47K
R2052	Resistor	1K
R2053	Resistor	1K
R2054	Resistor	1K
R2055	Resistor	1K
R2056	Resistor	1K
R2057	Resistor	1K
R2058	Resistor	1K
R2059	Resistor	1K
R2060	Resistor	1K
R2061	Resistor	1K
R2062	Resistor	1K
R2063	Resistor	1K
R2064	Resistor	1K
R2065	Resistor	2K2
R2066	Resistor	2K2
R2067	Resistor	2K2
R2068	Resistor	2K2
R2069	Resistor	2K2
R2070	Resistor	2K2
R2071	Resistor	2K2
R2072	Resistor	2K2
R2073	Resistor	2K2
R2074	Resistor	2K2
R2075	Resistor	220R
R2076	Resistor	82K
R2077	Resistor	82K
R2078	Resistor	820R
R2079	Resistor	820R
R2080	Resistor	120R
R2081	Resistor	120R
R2082	Resistor	120R
R2085	Resistor	220R
R2087	Resistor	10K

R2088	Resistor	220R
R2089	Resistor	10R
R2090	Resistor	1K
R2091	Resistor	47K
R2092	Resistor	220R
R2093	Resistor	220R
R2094	Resistor	220R
R2095	Resistor	47K
R2096	Resistor	47K
R2097	Resistor	47K
R2098	Resistor	47K
S2001	Encoder	
S2002	Encoder	
S2003	Switch KEY	
S2004	Switch KEY	
S2005	Switch KEY	
S2006	Switch KEY	
S2007	Switch KEY	
S2008	Switch KEY	
S2009	Switch KEY	
S2010	Switch KEY	
S2011	Switch KEY	
S2012	Switch KEY	
S2013	Switch KEY	
S2014	Switch KEY	
S2015	Switch KEY	
S2016	Switch KEY	
S2017	Switch KEY	
T2001	Transistor	NPN Transistor
T2002	Transistor	NPN Transistor
T2100	Transistor	NPN Transistor
U2001	IC	MCU
U2002	IC	LCD Drive
U2003	IC	LCD Drive
U2004	IC	Power management IC

TX-RX Unit & Panel Unit Schematics:



TX-RX UNIT Parts List:

Designators	Name	Comment
C1001	Capacitor	3P
C1002	Capacitor	33P
C1004	Capacitor	102P
C1006	Capacitor	102P
C1007	Capacitor	102P
C1008	Capacitor	102P
C1010	Capacitor	102P
C1011	Capacitor	102P
C1012	Capacitor	68P
C1013	Capacitor	102P
C1014	Capacitor	102P
C1015	Capacitor	0P5
C1016	Capacitor	27P
C1017	Capacitor	2P
C1018	Capacitor	2P
C1019	Capacitor	0P5
C1020	Capacitor	2P
C1021	Capacitor	27P
C1022	Capacitor	1P5
C1023	Capacitor	1P
C1024	Capacitor	27P
C1026	Capacitor	15P
C1027	Capacitor	103P
C1028	Capacitor	4P
C1029	Capacitor	6P
C1030	Capacitor	102P
C1031	Capacitor	7P
C1032	Capacitor	1P5
C1033	Capacitor	5P
C1034	Capacitor	22P
C1035	Capacitor	102P
C1036	Capacitor	1P
C1037	Capacitor	102P
C1038	Capacitor	2P
C1039	Capacitor	102P
C1040	Capacitor	102P

C1041	Capacitor	102P
C1042	Capacitor	102P
C1043	Capacitor	102P
C1044	Capacitor	68P
C1045	Capacitor	0P5
C1046	Capacitor	27P
C1047	Capacitor	0P5
C1048	Capacitor	1P
C1049	Capacitor	0P5
C1050	Capacitor	27P
C1051	Capacitor	1P5
C1052	Capacitor	27P
C1054	Capacitor	15P
C1055	Capacitor	103P
C1056	Capacitor	10P
C1057	Capacitor	102P
C1058	Capacitor	6P
C1059	Capacitor	1P5
C1060	Capacitor	6P
C1061	Capacitor	22P
C1062	Capacitor	102P
C1063	Capacitor	1P
C1064	Capacitor	102P
C1065	Capacitor	102P
C1066	Capacitor	2P
C1067	Capacitor	102P
C1068	Capacitor	102P
C1070	Capacitor	24P
C1071	Capacitor	2P
C1073	Capacitor	27P
C1074	Capacitor	15P
C1075	Capacitor	1P
C1076	Capacitor	1P5
C1077	Capacitor	102P
C1078	Capacitor	56P
C1079	Capacitor	0P75
C1080	Capacitor	0P75
C1081	Capacitor	102P

C1082	Capacitor	104P
C1083	Capacitor	102P
C1086	Capacitor	102P
C1087	Capacitor	102P
C1088	Capacitor	1P
C1089	Capacitor	8P
C1090	Capacitor	1P
C1091	Capacitor	47P
C1092	Capacitor	2P
C1093	Capacitor	18P
C1094	Capacitor	0P75
C1095	Capacitor	1P5
C1096	Capacitor	47P
C1097	Capacitor	8P
C1098	Capacitor	1P
C1099	Capacitor	1P
C1100	Capacitor	47P
C1101	Capacitor	102P
C1102	Capacitor	103P
C1103	Capacitor	102P
C1104	Capacitor	7P
C1105	Capacitor	102P
C1106	Capacitor	102P
C1107	Capacitor	102P
C1108	Capacitor	104P
C1109	Capacitor	1P
C1110	Capacitor	102P
C1111	Capacitor	102P
C1112	Capacitor	8P
C1113	Capacitor	1P
C1114	Capacitor	47P
C1115	Capacitor	1P5
C1116	Capacitor	18P
C1117	Capacitor	1P5
C1118	Capacitor	0P75
C1119	Capacitor	47P
C1120	Capacitor	1P5
C1121	Capacitor	8P

C1122	Capacitor	1P
C1123	Capacitor	47P
C1124	Capacitor	10P
C1125	Capacitor	103P
C1126	Capacitor	102P
C1127	Capacitor	7P
C1128	Capacitor	102P
C1129	Capacitor	102P
C1131	Capacitor	18P
C1132	Capacitor	7P
C1134	Capacitor	22P
C1135	Capacitor	102P
C1136	Capacitor	102P
C1137	Capacitor	102P
C1138	Capacitor	0P5
C1139	Capacitor	102P
C1140	Capacitor	102P
C1141	Capacitor	102P
C1142	Capacitor	47P
C1143	Capacitor	7P
C1144	Capacitor	2P
C1145	Capacitor	5P
C1146	Capacitor	22P
C1148	Capacitor	102P
C1149	Capacitor	0P5
C1150	Capacitor	102P
C1151	Capacitor	15P
C1152	Capacitor	7P
C1153	Capacitor	2P
C1154	Capacitor	6P
C1155	Capacitor	22P
C1157	Capacitor	102P
C1158	Capacitor	0P5
C1159	Capacitor	102P
C1162	Capacitor	102P
C1163	Capacitor	102P
C1165	Capacitor	102P
C1166	Capacitor	2P

C1167	Capacitor	47P
C1168	Capacitor	1P
C1169	Capacitor	2P
C1170	Capacitor	6P
C1171	Capacitor	7P
C1172	Capacitor	5P
C1173	Capacitor	12P
C1174	Capacitor	102P
C1175	Capacitor	1P5
C1176	Capacitor	1P
C1178	Capacitor	8P
C1179	Capacitor	102P
C1181	Capacitor	1P
C1182	Capacitor	1P
C1183	Capacitor	10P
C1184	Capacitor	1P
C1185	Capacitor	2P
C1186	Capacitor	4P
C1187	Capacitor	102P
C1188	Capacitor	1P
C1190	Capacitor	8P
C1191	Capacitor	102P
C1193	Capacitor	1P
C1194	Capacitor	0P75
C1195	Capacitor	10P
C1196	Capacitor	0P5
C1198	Capacitor	102P
C1199	Capacitor	6P
C1200	Capacitor	102P
C1201	Capacitor	102P
C1202	Capacitor	223P
C1203	Capacitor	15P
C1204	Capacitor	6P
C1205	Capacitor	102P
C1207	Capacitor	103P
C1208	Capacitor	102P
C1209	Capacitor	102P
C1210	Capacitor	104P

C1211	Capacitor	103P
C1212	Capacitor	104P
C1213	Capacitor	104P
C1214	Capacitor	102P
C1215	Capacitor	103P
C1216	Capacitor	103P
C1217	Capacitor	102P
C1218	Capacitor	103P
C1219	Capacitor	102P
C1220	Capacitor	102P
C1221	Capacitor	223P
C1222	Capacitor	12P
C1223	Capacitor	6P
C1224	Capacitor	102P
C1226	Capacitor	103P
C1227	Capacitor	102P
C1228	Capacitor	102P
C1229	Capacitor	104P
C1230	Capacitor	103P
C1231	Capacitor	104P
C1232	Capacitor	104P
C1233	Capacitor	102P
C1234	Capacitor	103P
C1235	Capacitor	103P
C1236	Capacitor	102P
C1237	Capacitor	103P
C1238	Capacitor	102P
C1239	Capacitor	103P
C1240	Capacitor	82P
C1242	Capacitor	102P
C1243	Resistor	0R
C1244	Capacitor	103P
C1245	Capacitor	68P
C1246	Capacitor	56P
C1247	Capacitor	102P
C1248	Capacitor	102P
C1249	Capacitor	1UF
C1250	Capacitor	22P

C1251	Capacitor	104P
C1252	Capacitor	47P
C1254	Capacitor	103P
C1255	Capacitor	103P
C1256	Capacitor	104P
C1257	Capacitor	10UF
C1259	Capacitor	102P
C1260	Capacitor	102P
C1261	Capacitor	473P
C1262	Capacitor	220P
C1263	Capacitor	470P
C1264	Capacitor	470P
C1265	Capacitor	104P
C1266	Capacitor	103P
C1267	Capacitor	103P
C1268	Capacitor	102P
C1269	Capacitor	22UF
C1270	Capacitor	103P
C1271	Capacitor	103P
C1272	Capacitor	20P
C1273	Capacitor	104P
C1274	Capacitor	47P
C1276	Capacitor	103P
C1277	Capacitor	103P
C1278	Capacitor	104P
C1279	Capacitor	102P
C1280	Capacitor	102P
C1281	Capacitor	473P
C1282	Capacitor	220P
C1283	Capacitor	470P
C1284	Capacitor	470P
C1285	Capacitor	104P
C1286	Capacitor	103P
C1287	Capacitor	103P
C1288	Capacitor.TAN	22UF
C1289	Capacitor	103P
C1290	Capacitor	103P
C1291	Capacitor	102P

C1293	Capacitor	102P
C1295	Capacitor	102P
C1298	Capacitor	102P
C1300	Capacitor	102P
C1301	Capacitor.TAN	10UF
C1303	Capacitor	100P
C1310	Capacitor	103P
C1311	Capacitor	1UF
C1312	Capacitor	1UF
C1313	Capacitor	100P
C1314	Capacitor	104P
C1315	Capacitor	104P
C1316	Capacitor	1UF
C1317	Capacitor	223P
C1318	Capacitor	223P
C1320	Capacitor	103P
C1321	Capacitor	472P
C1323	Capacitor	102P
C1325	Capacitor	682P
C1326	Capacitor	105P
C1327	Capacitor	474P
C1328	Capacitor	30P
C1330	Capacitor	103P
C1331	Capacitor	30P
C1332	Capacitor	47P
C1334	Capacitor	223P
C1335	Capacitor	223P
C1336	Capacitor	103P
C1337	Capacitor	223P
C1338	Capacitor	473P
C1340	Capacitor	1UF
C1342	Capacitor	1UF
C1343	Capacitor	102P
C1344	Capacitor.TAN	10UF/10V
C1345	Capacitor	103P
C1346	Capacitor	104P
C1347	Capacitor	104P
C1348	Capacitor	102P

C1350	E.Capacitor	100UF/16V
C1353	E.Capacitor	220UF/16V
C1354	Capacitor	102P
C1355	Capacitor	104P
C1356	Capacitor	104P
C1357	Capacitor	47P
C1358	Resistor	10K
C1359	Capacitor	47P
C1360	Capacitor	47P
C1361	Capacitor.TAN	22UF
C1363	Capacitor	104P
C1364	Capacitor	104P
C1365	Capacitor	102P
C1366	Capacitor.TAN	10UF/10V
C1367	Capacitor.TAN	10UF/10V
C1368	Capacitor	102P
C1369	E.Capacitor	470UF/10V
C1370	E.Capacitor	470UF/16V
C1372	Capacitor	104P
C1373	Capacitor	1UF
C1375	Capacitor	152P
C1377	Capacitor	153P
C1378	Capacitor	1UF
C1379	Capacitor	102P
C1380	Capacitor.TAN	10UF/16V
C1381	Capacitor	103P
C1383	Capacitor	1UF
C1384	Capacitor	1UF
C1385	Capacitor	22P
C1386	Capacitor	104P
C1387	Capacitor	1UF
C1388	Capacitor	47P
C1389	Capacitor	47P
C1390	Capacitor	47P
C1391	Capacitor	47P
C1392	Capacitor	47P
C1393	E.Capacitor	100UF/16V
C1394	Capacitor	102P

C1395	Capacitor.TAN	22UF/16V
C1396	Capacitor	102P
C1400	Capacitor.TAN	10UF
C1401	Capacitor	102P
C1403	Capacitor	223P
C1404	E.Capacitor	2200UF/16V
C1405	Capacitor	474P
C1406	Capacitor	100P
C1407	Capacitor	104P
C1408	Capacitor	102P
C1409	Capacitor	10UF
C1411	Capacitor	104P
C1412	Capacitor	104P
C1413	Capacitor	103P
C1414	Capacitor	103P
C1415	E.Capacitor	100UF/16V
C1417	Capacitor	22P
C1418	Capacitor	105P
C1419	Capacitor	22P
C1420	Capacitor	102P
C1421	Capacitor	103P
C1422	Capacitor	103P
C1426	Capacitor	30P
C1427	Capacitor	103P
C1429	Capacitor	102P
C1431	Capacitor	1UF
C1433	Capacitor.TAN	10UF
C1434	Capacitor.TAN	10UF
C1436	Capacitor.TAN	10UF
C1438	Capacitor.TAN	10UF
C1439	Capacitor	102P
C1440	Capacitor	102P
C1441	Capacitor.TAN	10UF
C1442	Capacitor	102P
C1443	Capacitor	102P
C1446	Capacitor	102P
C1447	Resistor	0R
C1448	Capacitor	223P

C1449	Capacitor	1UF
C1450	Capacitor	33P
C1451	Capacitor	103P
C1452	Capacitor	33P
C1453	Capacitor	33P
C1454	Capacitor	105P
C1455	Capacitor	105P
C1456	Capacitor	103P
C1457	Capacitor	473P
C1458	Capacitor.TAN	10UF
C1459	Capacitor	102P
C1460	Capacitor	1UF
C1461	Capacitor	103P
C1462	Capacitor	100P
C1463	Capacitor	103P
C1464	Capacitor	104P
C1465	Capacitor	3P
C1466	Capacitor	102P
C1467	Capacitor	22P
C1468	Capacitor	102P
C1469	Capacitor	223P
C1470	Capacitor	104P
C1471	Capacitor.TAN	10UF(T.Y.)
C1472	Capacitor	104P
C1473	Capacitor	104P
C1474	Capacitor.TAN	104P(T.Y.)
C1475	Capacitor	104P
C1476	Capacitor.TAN	10UF(T.Y.)
C1477	Capacitor	104P
C1478	Capacitor	223P
C1479	Capacitor	33P
C1480	Capacitor	102P
C1481	Capacitor	103P
C1482	Capacitor	473P
C1483	Capacitor.TAN	10UF
C1484	Capacitor	102P
C1487	Capacitor	102P
C1488	Capacitor	102P

C1491	Capacitor	22P
C1492	Capacitor	104P
C1493	Capacitor	104P
C1495	Capacitor.TAN	10UF
C1496	Capacitor	104P
C1497	Capacitor	102P
C1499	Capacitor	102P
C1500	Capacitor	102P
C1501	Capacitor	102P
C1502	Capacitor	102P
C1503	Capacitor	12P
C1504	Capacitor	18P
C1505	Capacitor	10P
C1506	Capacitor	1P
C1507	Capacitor	102P
C1508	Capacitor	102P
C1509	Capacitor	3P
C1510	Capacitor	102P
C1511	Capacitor	102P
C1512	Capacitor.TAN	104P(T.Y.)
C1513	Capacitor	102P
C1514	Capacitor	102P
C1515	Capacitor	102P
C1516	Capacitor	102P
C1517	Capacitor	102P
C1518	Capacitor	47P
C1519	Capacitor	22P
C1520	Capacitor	18P
C1521	Capacitor	2P
C1522	Capacitor	102P
C1523	Capacitor	102P
C1524	Capacitor	2P
C1525	Capacitor	102P
C1526	Capacitor	102P
C1527	Capacitor	102P
C1528	Capacitor	18P
C1529	Capacitor	18P
C1530	Capacitor	10P

C1531	Capacitor	1P
C1532	Capacitor	102P
C1533	Capacitor	102P
C1534	Capacitor	2P
C1535	Capacitor	102P
C1536	Capacitor	102P
C1537	Capacitor	47P
C1538	Capacitor	20P
C1540	Capacitor	18P
C1541	Capacitor	2P
C1542	Capacitor	102P
C1543	Capacitor	102P
C1544	Capacitor	1P5
C1545	Capacitor	102P
C1546	Capacitor	102P
C1547	Capacitor	102P
C1548	Capacitor	104P
C1549	Capacitor	102P
C1550	Capacitor	10UF
C1551	Capacitor	473P
C1552	Capacitor	102P
C1554	Capacitor	102P
C1555	Capacitor	102P
C1556	Capacitor	102P
C1558	Capacitor	102P
C1559	Capacitor	7P
C1560	Capacitor	102P
C1561	Capacitor.TAN	22UF
C1562	Capacitor	102P
C1563	Capacitor	100P
C1564	Capacitor	18P
C1565	Capacitor	103P
C1566	Capacitor	474P
C1567	Capacitor	223P
C1568	Capacitor	102P
C1569	Capacitor	8P
C1570	Capacitor	8P
C1571	Capacitor	68P

C1572	Capacitor	82P
C1573	Capacitor	102P
C1574	Capacitor	104P
C1575	Capacitor	102P
C1576	Capacitor	102P
C1577	Capacitor	104P
C1578	Capacitor	102P
C1579	Capacitor	104P
C1580	Capacitor	102P
C1581	Capacitor	474P
C1582	Capacitor	102P
C1583	Capacitor	223P
C1584	Capacitor	102P
C1585	Capacitor	474P
C1586	Capacitor	18P/Q
C1587	Capacitor	10P/Q
C1588	Capacitor	100P/Q
C1589	Capacitor	104P
C1590	Capacitor	102P
C1591	Capacitor	33P/Q
C1592	Capacitor	104P
C1593	Capacitor	33P/Q
C1594	Capacitor	15P/Q
C1595	Capacitor	22P/Q
C1596	Capacitor	10P/Q
C1598	Capacitor	150P
C1599	Capacitor	39P/500V
C1600	Capacitor	15P/Q
C1601	Capacitor	104P
C1602	Capacitor	102P
C1603	Capacitor	39P/500V
C1604	Capacitor	39P/500V
C1605	Capacitor	1UF
C1606	Capacitor	474P
C1607	Capacitor	102P
C1608	Capacitor	100P/200V
C1609	Capacitor	39P/500V
C1610	Capacitor	39P/500V

C1611	Capacitor	102P
C1613	Capacitor	102P
C1614	Capacitor	102P
C1615	Capacitor	102P
C1617	Capacitor	5P/200V
C1618	Capacitor	56P/500V
C1619	Capacitor	56P/500V
C1620	Capacitor	27P/200V
C1621	Capacitor	27P/200V
C1623	Capacitor	220P/200V
C1624	Capacitor	220P/200V
C1625	Capacitor	0P5/P
C1626	Capacitor	22P/200V
C1627	Capacitor	5P
C1628	Capacitor	102P
C1629	Capacitor	22P/200V
C1630	Capacitor	7P/200V
C1631	Capacitor	22P/200V
C1632	Capacitor	27P/200V
C1633	Capacitor	0P5/P
C1634	Capacitor	472P
C1635	Capacitor	102P
C1636	Capacitor	4P
C1637	Capacitor	102P
C1638	Capacitor	103P
C1639	Capacitor	33P
C1640	Capacitor	56P
C1641	Capacitor	102P
C1642	Capacitor	102P
C1643	Capacitor	102P
C1644	Capacitor	24P
C1645	Capacitor	18P
C1646	Capacitor	10P
C1647	Capacitor	18P/200V
C1648	Capacitor	220P/200V
C1649	Capacitor	220P/200V
C1650	Capacitor	15P/200V
C1651	Capacitor	15P/200V

C1652	Capacitor	12P/500V
C1653	Capacitor	100P/Q
C1654	Capacitor	100P/Q
C1657	Capacitor	0P5/P
C1658	Capacitor	6P
C1659	Capacitor	102P
C1660	Capacitor	6P/200V
C1661	Capacitor	3P/200V
C1662	Capacitor	6P/200V
C1663	Capacitor	0P5/P
C1664	Capacitor	102P
C1665	Capacitor	4P
C1666	Capacitor	1P5/200V
C1667	Capacitor	3P/200V
C1668	Capacitor	4P/200V
C1669	Capacitor	4P/200V
C1670	Capacitor	0P5/200V
C1671	Capacitor	2P/200V
C1672	Capacitor	2P/200V
C1673	Capacitor	4P/200V
C1674	Capacitor	4P/200V
C1676	Capacitor	102P
C1677	Capacitor	102P
C1678	Capacitor	102P
C1680	Capacitor	1UF
C1681	Capacitor	11P/Q
C1688	Capacitor	102P
C1692	Capacitor	1P
C1693	Capacitor	15P
C1694	Capacitor	223P
C1695	Capacitor	10P
C1696	Capacitor	104P
C1697	Capacitor	104P
C1708	Capacitor	102P
C1715	Capacitor.TAN	10UF
C1717	Capacitor.TAN	10UF
C1724	Capacitor	24P
C1725	Capacitor	24P

C1726	Capacitor	475P
C1732	Capacitor	68P
C1733	Capacitor	270P
C1734	Capacitor	390P
C1736	Capacitor	102P
C1738	Capacitor	39P
C1740	Capacitor	104P
C1741	Capacitor	104P
CD1001	MCF	CDBM450C24
CD1002	MCF	CDBM450C24
CF1001	MCF	CFWM450E
CF1002	MCF	CFWM450G
CF1003	MCF	CFWM450E
CF1004	MCF	CFWM450G
CR1010	Crystal	32.768KHz
CR1101	Crystal	3.579MHz
D1001	Diode	HSC277
D1002	Diode	HSC277
D1003	Diode	Varactor
D1004	Diode	Varactor
D1005	Diode	Varactor
D1006	Diode	Varactor
D1007	Diode	Varactor
D1008	Diode	Varactor
D1009	Diode	HSC277
D1010	Diode	Varactor
D1011	Diode	Varactor
D1012	Diode	Varactor
D1013	Diode	Varactor
D1014	Diode	Varactor
D1015	Diode	HSC277
D1017	Diode	Varactor
D1018	Diode	Varactor
D1019	Diode	Varactor
D1020	Diode	Varactor
D1021	Diode	Varactor
D1022	Diode	Varactor
D1023	Diode	Varactor

D1026	Diode	Varactor
D1027	Diode	Varactor
D1028	Diode	Varactor
D1029	Diode	Switching diode
D1030	Diode	Switching diode
D1031	Diode	Composite diode
D1032	Diode	Varactor
D1033	Diode	Varactor
D1034	Diode	Varactor
D1035	Diode	Composite diode
D1036	Diode	Rectifier diode
D1037	Diode	Composite diode
D1038	Diode	Rectifier diode
D1039	Diode	HSC277
D1040	Diode	HSC277
D1041	Diode	HSC277
D1042	Diode	HSC277
D1043	Diode	HSC277
D1044	Diode	HSC277
D1045	Diode	HSC277
D1046	Diode	HSC277
D1047	Diode	Composite diode
D1048	Diode	Composite diode
D1049	Diode	Composite diode
D1050	Diode	Composite diode
D1053	Diode	HZM27WA
D1054	Diode	HZM27WA
D1055	Diode	Composite diode
D1056	Diode	P6KA18
D1057	Diode	D1F20
D1060	Diode	Composite diode
D1068	Diode	Composite diode
D1074	Diode	Composite diode
D1079	Diode	Varactor
D1080	Diode	Varactor
D1081	Diode	HSC277
D1082	Diode	Varactor
D1083	Diode	Varactor

D1084	Diode	Varactor
D1085	Diode	Varactor
D1086	Diode	HSC277
D1087	Diode	HSC277
D1088	Diode	Composite diode
D1089	Diode	HSC277
D1090	Diode	Varactor
D1091	Diode	Varactor
D1092	Diode	HSC277
D1093	Diode	HSC277
D1094	Diode	Varactor
D1095	Diode	Varactor
D1096	Diode	Varactor
D1097	Diode	HSC277
D1098	Diode	Composite diode
D1099	Diode	HSC277
D1100	Diode	Composite diode
D1101	Diode	HSC277
D1102	Diode	HSC277
D1103	Diode	HZM13NB2
D1104	Diode	Composite diode
D1105	Diode	HSC277
D1106	Diode	HSC277
D1107	Diode	Switching diode
D1108	Diode	Switching diode
D1109	Diode	Rectifier diode
D1110	Diode	Rectifier diode
D1111	Diode	HSC277
D1112	Diode	HSC277
D1113	Diode	Switching diode
D1114	Diode	Switching diode
D1115	Diode	Switching diode
D1116	Diode	Switching diode
D1117	Diode	HSC277
D1118	Diode	Switching diode
D1119	Diode	Switching diode
D1120	Diode	Switching diode
D1121	Diode	Rectifier diode

D1122	Diode	Rectifier diode
D1123	Diode	RCCA-301Q43UA
FB1001	Inductor	Ferrite bead
FB1002	Inductor	Ferrite bead
FB1003	Inductor	Ferrite bead
FL1001	MCF	38.55MHz
FL1002	MCF	38.55MHz
FL1003	MCF	49.95MHz
FL1004	MCF	49.95MHz
IC1041	IC	FM Radio tuner
IC1044	IC	IF processor IC
IC1047	IC	IF processor IC
IC1052	IC	Operational amplifier
IC1066	IC	Switch IC
IC1067	IC	Switch IC
IC1068	IC	Audio amplifier
IC1069	IC	Audio amplifier
IC1071	IC	Switch IC
IC1080	IC	Power management IC
IC1081	IC	Power management IC
IC1084	IC	Power management IC
IC1088	IC	Memory
IC1100	IC	DTMF receiver
IC1101	IC	DTMF receiver
IC1102	IC	Switch IC
IC1104	IC	MCU
IC1109	IC	PLL IC
IC1112	IC	PLL IC
IC1129	IC	Operational amplifier
J1001	Modular JACK	
J1002	PIN ASSY	2.54*2P
J1003	Modular JACK	
J1004	PIN ASSY	1.5*2P
J1005	Modular JACK	
JP1011	PIN ASSY	0.5*10P
JP1013	PIN ASSY	0.5*7P*2B
JP1014	PIN ASSY	0.5*7P*2B
L1000	Inductor	Wire wound

L1001	Inductor	Wire wound
L1002	Inductor	Wire wound
L1003	Inductor	Wire wound
L1004	Inductor	Wire wound
L1005	Inductor	Ceramic
L1006	Inductor	Ceramic
L1007	Inductor	Wire wound
L1008	Inductor	Air-Core Coil
L1009	Inductor	Air-Core Coil
L1010	Inductor	Ceramic
L1011	Inductor	Ceramic
L1012	Inductor	Ceramic
L1013	Inductor	Ceramic
L1014	Inductor	Wire wound
L1015	Inductor	Air-Core Coil
L1016	Inductor	Air-Core Coil
L1017	Inductor	Ceramic
L1018	Inductor	Ceramic
L1019	Inductor	Ceramic
L1020	Inductor	Wire wound
L1021	Inductor	Wire wound
L1022	Inductor	Wire wound
L1023	Inductor	Wire wound
L1024	Inductor	Wire wound
L1025	Inductor	CI1UH
L1026	Inductor	Wire wound
L1027	Inductor	Wire wound
L1028	Inductor	Wire wound
L1029	Inductor	Ceramic
L1030	Inductor	CI1UH
L1031	Inductor	Wire wound
L1032	Inductor	Wire wound
L1033	Inductor	Wire wound
L1034	Inductor	Ceramic
L1035	Inductor	Wire wound
L1036	Inductor	Wire wound
L1037	Inductor	Wire wound
L1038	Inductor	Wire wound

L1039	Inductor	Ceramic
L1040	Inductor	Ceramic
L1041	Inductor	Ceramic
L1042	Inductor	Ceramic
L1043	Inductor	Ceramic
L1044	Inductor	Ceramic
L1045	Inductor	Ceramic
L1046	Inductor	Ceramic
L1047	Inductor	Ceramic
L1048	Inductor	Ceramic
L1049	Inductor	Ceramic
L1050	Inductor	Ceramic
L1051	Inductor	Ceramic
L1052	Inductor	Ceramic
L1053	Inductor	Ceramic
L1054	Inductor	Ceramic
L1055	Inductor	Ceramic
L1056	Inductor	Ceramic
L1057	Inductor	Wire wound
L1058	Inductor	Wire wound
L1059	Inductor	CI1UH
L1060	Inductor	Wire wound
L1061	Inductor	Wire wound
L1062	Inductor	CI1UH
L1063	Inductor	CI330NH
L1065	Inductor	CI330NH
L1066	Inductor	CI1UH
L1067	Inductor	Ceramic
L1069	Inductor	CI1UH
L1070	Inductor	CI1UH
L1071	Inductor	Wire wound
L1072	Inductor	Ceramic
L1073	Inductor	Ceramic
L1074	Inductor	CI1UH
L1075	Inductor	Wire wound
L1076	Inductor	Ceramic
L1077	Inductor	CI150NH
L1078	Inductor	CI1UH

L1079	Inductor	Air-Core Coil
L1080	Inductor	Ceramic
L1081	Inductor	Ceramic
L1082	Inductor	CI1UH
L1083	Inductor	Wire wound
L1084	Inductor	Ceramic
L1085	Inductor	CH150NH
L1086	Inductor	CI1UH
L1087	Inductor	Ceramic
L1088	Inductor	Ceramic
L1089	Inductor	Wire wound
L1090	Inductor	Ceramic
L1091	Inductor	Air-Core Coil
L1092	Inductor	Air-Core Coil
L1093	Inductor	Air-Core Coil
L1094	Inductor	Air-Core Coil
L1095	Inductor	Air-Core Coil
L1096	Inductor	Air-Core Coil
L1097	Inductor	Air-Core Coil
L1098	Inductor	CI1.0UH
L1099	Inductor	Air-Core Coil
L1100	Inductor	Air-Core Coil
L1101	Inductor	CI1UH
L1102	Inductor	Air-Core Coil
L1103	Inductor	Air-Core Coil
L1104	Inductor	Wire wound
L1105	Inductor	Wire wound
L1106	Inductor	Air-Core Coil
L1107	Inductor	Air-Core Coil
L1108	Inductor	Air-Core Coil
L1109	Inductor	Air-Core Coil
L1110	Inductor	Air-Core Coil
L1111	Inductor	Air-Core Coil
L1112	Inductor	Wire wound
L1113	Inductor	Air-Core Coil
L1114	Inductor	Air-Core Coil
L1115	Inductor	Air-Core Coil
L1116	Inductor	Air-Core Coil

L1117	Inductor	Air-Core Coil
L1118	Inductor	Air-Core Coil
L1119	Inductor	Air-Core Coil
L1120	Inductor	Air-Core Coil
L1121	Inductor	Air-Core Coil
L1122	Inductor	Ceramic
L1124	Inductor	CI390NH
L1125	Inductor	Ceramic
L1126	Inductor	CI1UH
L1127	Inductor	CI1UH
L1128	Inductor	CI330NH
L1129	Inductor	CI330NH
L1130	Inductor	CI330NH
L1131	Inductor	CI330NH
L1132	Inductor	Ferrite bead
L1133	Inductor	Wire wound
L1134	Inductor	Ferrite bead
L1136	Inductor	Ceramic
L1138	Inductor	Ceramic
Q1001	Transistor	N-MOSFET
Q1002	Transistor	N-MOSFET
Q1003	Transistor	N-MOSFET
Q1004	Transistor	NPN transistor
Q1005	Transistor	N-MOSFET
Q1006	Transistor	NPN transistor
Q1014	Transistor	N-MOSFET
Q1015	Transistor	N-MOSFET
Q1016	Transistor	N-MOSFET
Q1017	Transistor	N-MOSFET
Q1018	Transistor	N-MOSFET
Q1019	Transistor	N-MOSFET
Q1020	Transistor	NPN transistor
Q1021	Transistor	NPN transistor
Q1022	Transistor	NPN transistor
Q1023	Transistor	NPN transistor
Q1024	Transistor	NPN transistor
Q1025	Transistor	NPN transistor
Q1026	Transistor	NPN transistor

Q1027	Transistor	NPN transistor
Q1029	Transistor	NPN transistor
Q1030	Transistor	NPN transistor
Q1031	Transistor	NPN transistor
Q1032	Transistor	NPN transistor
Q1033	Transistor	NPN transistor
Q1035	Transistor	NPN transistor
Q1036	Transistor	NPN transistor
Q1037	Transistor	NPN transistor
Q1038	Transistor	NPN transistor
Q1039	Transistor	NPN transistor
Q1040	Transistor	NPN transistor
Q1042	Transistor	NPN transistor
Q1043	Transistor	NPN transistor
Q1045	Transistor	NPN transistor
Q1046	Transistor	Bias resistor transistor
Q1047	Transistor	NPN transistor
Q1048	Transistor	NPN transistor
Q1049	Transistor	Bias resistor transistor
Q1050	Transistor	NPN transistor
Q1056	Transistor	NPN transistor
Q1057	Transistor	NPN transistor
Q1058	Transistor	Bias resistor transistor
Q1059	Transistor	Bias resistor transistor
Q1060	Transistor	Bias resistor transistor
Q1061	Transistor	Bias resistor transistor
Q1064	Transistor	Power transistor
Q1065	Transistor	Bias resistor transistor
Q1070	Transistor	Bias resistor transistor
Q1072	Transistor	Bias resistor transistor
Q1073	Transistor	Bias resistor transistor
Q1075	Transistor	Bias resistor transistor
Q1076	Transistor	NPN transistor
Q1078	Transistor	PNP transistor
Q1082	Transistor	NPN transistor
Q1083	Transistor	PNP transistor
Q1090	Transistor	Composite transistor
Q1091	Transistor	Composite transistor

Q1092	Transistor	Composite transistor
Q1093	Transistor	Composite transistor
Q1094	Transistor	Bias resistor transistor
Q1096	Transistor	Composite transistor
Q1097	Transistor	Bias resistor transistor
Q1098	Transistor	NPN transistor
Q1099	Transistor	NPN transistor
Q1100	Transistor	Composite transistor
Q1101	Transistor	Bias resistor transistor
Q1102	Transistor	Composite transistor
Q1103	Transistor	Bias resistor transistor
Q1104	Transistor	Bias resistor transistor
Q1105	Transistor	Bias resistor transistor
Q1106	Transistor	Bias resistor transistor
Q1107	Transistor	Bias resistor transistor
Q1108	Transistor	PNP transistor
Q1109	Transistor	Bias resistor transistor
Q1110	Transistor	Bias resistor transistor
Q1111	Transistor	PNP transistor
Q1112	Transistor	Bias resistor transistor
Q1113	Transistor	NPN transistor
Q1114	Transistor	Bias resistor transistor
Q1115	Transistor	Bias resistor transistor
Q1116	Transistor	NPN transistor
Q1117	Transistor	NPN transistor
Q1118	Transistor	NPN transistor
Q1119	Transistor	NPN transistor
Q1120	Transistor	NPN transistor
Q1121	Transistor	NPN transistor
Q1122	Transistor	NPN transistor
Q1123	Transistor	NPN transistor
Q1124	Transistor	NPN transistor
Q1125	Transistor	NPN transistor
Q1126	Transistor	NPN transistor
Q1127	Transistor	NPN transistor
Q1128	Transistor	NPN transistor
Q1130	Transistor	Bias resistor transistor
Q1131	Transistor	Bias resistor transistor

Q1132	Transistor	N-MOSFET
Q1133	Transistor	NPN transistor
Q1134	Transistor	Drive transistor
Q1135	Transistor	Final transistor
R1001	Resistor	15K
R1002	Resistor	100K
R1003	Resistor	100R
R1004	Resistor	0R
R1005	Resistor	4K7
R1006	Resistor	100R
R1007	Resistor	100K
R1008	Resistor	100K
R1009	Resistor	100K
R1010	Resistor	33K
R1011	Resistor	220K
R1012	Resistor	100R
R1013	Resistor	1K
R1014	Resistor	100R
R1015	Resistor	0R
R1016	Resistor	4K7
R1017	Resistor	100R
R1018	Resistor	47K
R1019	Resistor	1M
R1020	Resistor	1K
R1021	Resistor	1K
R1022	Resistor	47K
R1023	Resistor	220K
R1025	Resistor	10K
R1026	Resistor	47K
R1027	Resistor	100K 1%
R1028	Resistor	82K
R1030	Resistor	100K
R1031	Resistor	100R
R1032	Resistor	0R
R1033	Resistor	4K7
R1034	Resistor	100R
R1035	Resistor	100R
R1036	Resistor	100K

R1037	Resistor	100K
R1038	Resistor	100K
R1039	Resistor	33K
R1040	Resistor	220K
R1041	Resistor	150R
R1042	Resistor	1K
R1045	Resistor	0R
R1046	Resistor	4K7
R1047	Resistor	100R
R1048	Resistor	47K
R1049	Resistor	1M
R1050	Resistor	2K2
R1051	Resistor	1K2
R1052	Resistor	47K
R1053	Resistor	220K
R1057	Resistor	82K
R1059	Resistor	10K
R1060	Resistor	47R
R1061	Resistor	47K
R1062	Resistor	10K
R1063	Resistor	47R
R1064	Resistor	47R
R1065	Resistor	680R
R1066	Resistor	100R
R1067	Resistor	220K
R1068	Resistor	220K
R1069	Resistor	220K
R1070	Resistor	15K
R1071	Resistor	120K
R1072	Resistor	47K
R1073	Resistor	220K
R1074	Resistor	150R
R1075	Resistor	470R
R1076	Resistor	47R
R1077	Resistor	680R
R1078	Resistor	100R
R1079	Resistor	220K
R1080	Resistor	220K

R1081	Resistor	220K
R1082	Resistor	15K
R1083	Resistor	120K
R1084	Resistor	47K
R1085	Resistor	220K
R1086	Resistor	150R
R1087	Resistor	470R
R1088	Resistor	10K
R1089	Resistor	47K
R1090	Resistor	NC
R1091	Resistor	10K
R1092	Resistor	47R
R1093	Resistor	10K
R1094	Resistor	47R
R1095	Resistor	47R
R1096	Resistor	330R
R1097	Resistor	100R
R1098	Resistor	47K
R1100	Resistor	1M5
R1101	Resistor	47R
R1102	Resistor	330R
R1103	Resistor	100R
R1104	Resistor	47K
R1106	Resistor	1M
R1107	Resistor	4K7
R1108	Resistor	470R
R1109	Resistor	470R
R1110	Resistor	4K7
R1111	Resistor	47K
R1112	Resistor	100R
R1113	Resistor	47R
R1114	Resistor	330K
R1115	Resistor	22R
R1116	Resistor	100R
R1117	Resistor	100R
R1118	Resistor	100R
R1119	Resistor	820K
R1120	Resistor	820K

R1121	Resistor	100R
R1122	Resistor	100R
R1123	Resistor	82R
R1124	Resistor	100R
R1125	Resistor	1M5
R1126	Resistor	1M5
R1127	Resistor	1K
R1128	Resistor	100R
R1129	Resistor	1K
R1130	Resistor	1K
R1131	Resistor	47K
R1132	Resistor	22R
R1133	Resistor	2K2
R1134	Resistor	100R
R1135	Resistor	0R
R1136	Resistor	560R
R1137	Resistor	330K
R1138	Resistor	8K2
R1139	Resistor	0R
R1140	Resistor	220R
R1141	Resistor	100R
R1142	Resistor	470R
R1143	Resistor	10R
R1145	Resistor	100R
R1146	Resistor	150K
R1147	Resistor	100K
R1148	Resistor	22K
R1149	Resistor	10K
R1150	Resistor	390K
R1151	Resistor	1K
R1152	Resistor	4K7
R1153	Resistor	330K
R1154	Resistor	47K
R1155	Resistor	4K7
R1156	Resistor	1M
R1157	Resistor	470R
R1158	Resistor	4K7
R1159	Resistor	1M

R1160	Resistor	470R
R1161	Resistor	1K
R1162	Resistor	4K7
R1163	Resistor	1K
R1164	Resistor	100K
R1166	Resistor	2K2
R1167	Resistor	100R
R1168	Resistor	100R
R1169	Resistor	560R
R1170	Resistor	330K
R1171	Resistor	8K2
R1172	Resistor	0R
R1173	Resistor	220R
R1174	Resistor	470R
R1175	Resistor	100R
R1176	Resistor	10R
R1177	Resistor	100R
R1178	Resistor	150K
R1179	Resistor	10K
R1180	Resistor	100K
R1181	Resistor	22K
R1182	Resistor	390K
R1183	Resistor	1K
R1184	Resistor	4K7
R1185	Resistor	330K
R1186	Resistor	47K
R1187	Resistor	4K7
R1188	Resistor	1M
R1189	Resistor	470R
R1190	Resistor	4K7
R1191	Resistor	1M
R1192	Resistor	470R
R1193	Resistor	1K
R1194	Resistor	4K7
R1195	Resistor	100R
R1196	Resistor	100K
R1197	Resistor	120K
R1199	Resistor	100R

R1200	Resistor	120K
R1202	Resistor	100K
R1203	Resistor	10K
R1204	Resistor	100K
R1205	Resistor	10K
R1206	Resistor	2K7
R1207	Resistor	100K
R1208	Resistor	3K3
R1209	Resistor	1K
R1210	Resistor	100K
R1211	Resistor	10K
R1212	Resistor	100K
R1213	Resistor	330K
R1214	Resistor	33K
R1215	Resistor	2K7
R1216	Resistor	3K3
R1217	Resistor	100K
R1218	Resistor	150K
R1219	Resistor	47R
R1220	Resistor	4K7
R1222	Resistor	22K
R1223	Resistor	22K
R1224	Resistor	22K
R1225	Resistor	22K
R1226	Resistor	22K
R1227	Resistor	22K
R1228	Resistor	2K7
R1229	Resistor	1K
R1230	Resistor	3K3
R1231	Resistor	100K
R1232	Resistor	5K6
R1233	Resistor	100K
R1234	Resistor	33K
R1235	Resistor	2K7
R1236	Resistor	3K3
R1237	Resistor	100K
R1238	Resistor	150K
R1239	Resistor	102P

R1240	Resistor	47R
R1241	Resistor	4K7
R1242	Resistor	22K
R1243	Resistor	22K
R1244	Resistor	22K
R1245	Resistor	22K
R1246	Resistor	22K
R1247	Resistor	1K
R1248	Resistor	22K
R1249	Resistor	5K6
R1250	Resistor	330K
R1251	Resistor	100K
R1252	Resistor	470R
R1253	Resistor	10R
R1254	Resistor	47R
R1255	Resistor	0R
R1263	Resistor	10K
R1264	Resistor	330K
R1265	Resistor	330K
R1274	Resistor	1K
R1275	Resistor	1K
R1276	Resistor	10K
R1277	Resistor	10K
R1278	Resistor	220K
R1279	Resistor	220K
R1280	Resistor	220K
R1281	Resistor	4K7
R1282	Resistor	220R
R1283	Resistor	4K7
R1284	Resistor	220K
R1285	Resistor	220K
R1286	Resistor	220K
R1287	Resistor	1K
R1288	Resistor	1K
R1289	Resistor	10K
R1290	Resistor	10K
R1291	Resistor	22K
R1292	Resistor	1K

R1293	Resistor	390K
R1294	Resistor	47K
R1295	Resistor	2K2
R1297	Resistor	220K
R1298	Resistor	5K6
R1299	Resistor	1K
R1300	Resistor	220K
R1301	Resistor	4K7
R1302	Resistor	5K6
R1304	Resistor	56K
R1305	Resistor	223P
R1306	Resistor	270R
R1307	Resistor	270R
R1308	Resistor	270R
R1309	Resistor	270R
R1310	Resistor	4K7
R1311	Resistor	390K
R1312	Resistor	390K
R1313	Resistor	47K
R1314	Resistor	10R
R1315	Resistor	10R
R1316	Resistor	100R
R1317	Resistor	2K
R1318	Resistor	100K
R1319	Resistor	3K3
R1320	Resistor	100K
R1321	Resistor	100K
R1322	Resistor	100K
R1323	Resistor	100K
R1324	Resistor	2K2
R1325	Resistor	12K
R1326	Resistor	12K
R1327	Resistor	56K
R1328	Resistor	10K
R1329	Resistor	82K
R1330	Resistor	10K
R1331	Resistor	100R
R1332	Resistor	1K

R1333	Resistor	22K
R1334	Resistor	2K2
R1335	Resistor	1K
R1336	Resistor	22K
R1337	Resistor	22R
R1338	Resistor	22R
R1339	Resistor	10R
R1340	Resistor	10R
R1341	Resistor	10R
R1342	Resistor	1K
R1343	Resistor	1K
R1344	Resistor	1K
R1345	Resistor	27K
R1346	Resistor	47K
R1347	Resistor	220R
R1348	Resistor	4K7
R1349	Resistor	4K7
R1350	Resistor	680K
R1351	Resistor	470K
R1352	Resistor	22K
R1353	Resistor	47R
R1354	Resistor	220K
R1355	Resistor	2K2
R1356	Resistor	56K 1%
R1357	Resistor	100K 1%
R1358	Resistor	100K 1%
R1359	Resistor	39K
R1360	Resistor	10K
R1361	Resistor	100K
R1362	Resistor	100K
R1363	Resistor	33R 1/2W
R1364	Resistor	4K7
R1365	Resistor	1K
R1366	Resistor	1K
R1367	Resistor	1K
R1368	Resistor	1K
R1369	Resistor	1K
R1370	Resistor	47K

R1371	Resistor	4K7
R1372	Resistor	220R
R1373	Resistor	220R
R1374	Resistor	220R
R1375	Resistor	220R
R1376	Resistor	47K
R1377	Resistor	22K
R1378	Resistor	2K2
R1379	Resistor	470K
R1381	Resistor	1K
R1382	Resistor	1K
R1383	Resistor	1K
R1385	Resistor	10K
R1386	Resistor	1K
R1388	Resistor	1K
R1389	Resistor	1K
R1390	Resistor	1K
R1391	Resistor	1K
R1392	Resistor	1K
R1393	Resistor	22K
R1394	Resistor	100K 1%
R1395	Resistor	1K
R1396	Resistor	3K3
R1400	Resistor	47K
R1403	Resistor	2K2
R1410	Resistor	56K 1%
R1412	Resistor	1K
R1413	Resistor	8K2
R1414	Resistor	15K
R1415	Resistor	8K2
R1416	Resistor	15K
R1417	Resistor	2K2
R1418	Resistor	2K2
R1419	Resistor	100K
R1420	Resistor	100K
R1421	Resistor	1K
R1422	Resistor	1K
R1423	Resistor	1K

R1424	Resistor	1K
R1425	Resistor	1K
R1426	Resistor	1K
R1427	Resistor	1K
R1428	Resistor	1K
R1429	Resistor	1M
R1430	Resistor	1K
R1431	Resistor	1K
R1432	Resistor	1K
R1433	Resistor	1K
R1434	Resistor	1K
R1435	Resistor	1K
R1436	Resistor	1K
R1437	Resistor	1K
R1438	Resistor	1K
R1439	Resistor	1K
R1440	Resistor	1K
R1441	Resistor	1K
R1442	Resistor	1K
R1443	Resistor	1K
R1444	Resistor	1K
R1445	Resistor	1K
R1446	Resistor	1K
R1447	Resistor	1K
R1448	Resistor	1K
R1449	Resistor	1K
R1450	Resistor	1K
R1451	Resistor	1K
R1452	Resistor	1K
R1453	Resistor	1K
R1454	Resistor	1K
R1455	Resistor	1K
R1456	Resistor	1K
R1457	Resistor	1K
R1458	Resistor	1K
R1459	Resistor	1K
R1460	Resistor	1K
R1461	Resistor	10K

R1462	Resistor	1K
R1463	Resistor	100K 1%
R1464	Resistor	100K 1%
R1465	Resistor	100K 1%
R1466	Resistor	2K2 1%
R1467	Resistor	1K
R1468	Resistor	1K
R1469	Resistor	1K
R1470	Resistor	1K
R1471	Resistor	1K
R1472	Resistor	1K
R1473	Resistor	1K
R1474	Resistor	1K
R1475	Resistor	1K
R1476	Resistor	1K
R1477	Resistor	1K
R1478	Resistor	1K
R1479	Resistor	1K
R1480	Resistor	1K
R1481	Resistor	1K
R1482	Resistor	1K
R1483	Resistor	1K
R1484	Resistor	1K
R1485	Resistor	1K
R1486	Resistor	1K
R1487	Resistor	1K
R1488	Resistor	1K
R1489	Resistor	10K
R1490	Resistor	39K
R1491	Resistor	10K
R1492	Resistor	1K
R1493	Resistor	27K
R1494	Resistor	680R
R1495	Resistor	1K2
R1496	Resistor	150R
R1497	Resistor	1K5
R1498	Resistor	1K5
R1499	Resistor	120K

R1500	Resistor	1K5
R1501	Resistor	22K
R1502	Resistor	100K
R1503	Resistor	680K
R1504	Resistor	100R
R1505	Resistor	220K
R1506	Resistor	10K
R1507	Resistor	10K
R1508	Resistor	10K
R1509	Resistor	47R
R1510	Resistor	100R
R1511	Resistor	470K
R1512	Resistor	120K
R1513	Resistor	82K
R1514	Resistor	10K
R1515	Resistor	470K
R1516	Resistor	10K
R1517	Resistor	1K
R1520	Resistor	100R
R1523	Resistor	22K
R1524	Resistor	100K
R1525	Resistor	680K
R1526	Resistor	220K
R1527	Resistor	10K
R1528	Resistor	10K
R1529	Resistor	10K
R1530	Resistor	100R
R1531	Resistor	680R
R1532	Resistor	470R
R1533	Resistor	2K2
R1534	Resistor	1K5
R1535	Resistor	47R
R1537	Resistor	150K
R1540	Resistor	1K5
R1542	Resistor	100K
R1543	Resistor	100K
R1544	Resistor	1K
R1545	Resistor	22K

R1546	Resistor	18K
R1547	Resistor	4K7
R1548	Resistor	68K
R1549	Resistor	82K
R1550	Resistor	100K
R1551	Resistor	47K
R1552	Resistor	10K
R1553	Resistor	100K
R1554	Resistor	220K
R1555	Resistor	180R
R1556	Resistor	3K3
R1557	Resistor	22K
R1558	Resistor	15K
R1559	Resistor	47R
R1560	Resistor	470R
R1561	Resistor	33K
R1562	Resistor	680R
R1563	Resistor	47R
R1564	Resistor	10K
R1565	Resistor	33K
R1566	Resistor	330R
R1567	Resistor	100R
R1568	Resistor	3K3
R1569	Resistor	15K
R1570	Resistor	22K
R1571	Resistor	2K2
R1572	Resistor	1K
R1573	Resistor	220R
R1574	Resistor	1K
R1575	Resistor	33K
R1576	Resistor	100R
R1577	Resistor	220R
R1578	Resistor	47R
R1579	Resistor	100K
R1580	Resistor	1K
R1581	Resistor	10K
R1582	Resistor	3K3
R1583	Resistor	15K

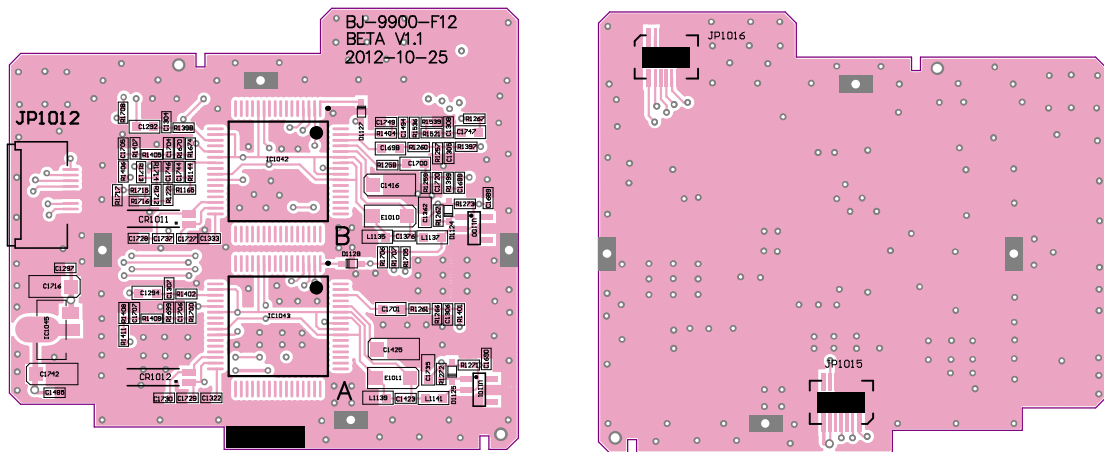
R1584	Resistor	22K
R1585	Resistor	680R
R1586	Resistor	47R
R1587	Resistor	470R
R1588	Resistor	33K
R1589	Resistor	100K
R1590	Resistor	2K2
R1591	Resistor	15K
R1592	Resistor	22K
R1593	Resistor	1K
R1594	Resistor	220R
R1595	Resistor	1K
R1596	Resistor	33K
R1597	Resistor	100R
R1598	Resistor	220R
R1599	Resistor	10K
R1600	Resistor	10K
R1601	Resistor	100K
R1602	Resistor	10R
R1603	Resistor	1K
R1604	Resistor	1K
R1605	Resistor	330K
R1606	Resistor	100R
R1607	Resistor	100R
R1608	Resistor	3K3
R1609	Resistor	6K8
R1610	Resistor	33K
R1611	Resistor	470K
R1613	Resistor	47R
R1614	Resistor	150R
R1615	Resistor	47R
R1616	Resistor	100R
R1617	Resistor	0R
R1618	Resistor	1K
R1619	Resistor	4K7
R1620	Resistor	220R
R1621	Resistor	22K
R1622	Resistor	27K

R1623	Resistor	220R
R1624	Resistor	220R
R1625	Resistor	15K
R1626	Resistor	47R
R1627	Resistor	12K
R1628	Resistor	220R
R1629	Resistor	470R
R1630	Resistor	100R
R1631	Resistor	1K
R1632	Resistor	1K
R1633	Resistor	1K
R1634	Resistor	100R
R1635	Resistor	82R
R1636	Resistor	82R
R1637	Resistor	220R
R1638	Resistor	47R
R1639	Resistor	47R
R1640	Resistor	47R
R1641	Resistor	820R 1/2W
R1642	Resistor	820R 1/2W
R1643	Resistor	470R 1/2W
R1644	Resistor	1K
R1645	Resistor	1K
R1646	Resistor	1K
R1647	Resistor	82R
R1648	Resistor	82R
R1649	Resistor	22K
R1650	Resistor	8K2
R1651	Resistor	10K
R1652	Resistor	10K
R1653	Resistor	10K
R1654	Resistor	33R 1W
R1655	Resistor	33R 1W
R1656	Resistor	33K
R1657	Resistor	10K
R1658	Resistor	100R
R1659	Resistor	4K7
R1660	Resistor	4K7

R1661	Resistor	4K7
R1662	Resistor	18R 1/2W
R1663	Resistor	39R/1W
R1664	Resistor	10K
R1665	Resistor	10K
R1666	Resistor	10K
R1667	Resistor	10K
R1668	Resistor	47R
R1672	Resistor	0R
R1673	Resistor	1K
R1677	Resistor	0R
R1678	Resistor	1K
R1679	Resistor	47R
R1680	Resistor	220R
R1681	Resistor	100R
R1682	Resistor	100R
R1683	Resistor	1K
R1684	Resistor	1K
R1685	Resistor	1K
R1686	Resistor	1K
R1689	Resistor	33K
R1690	Resistor	1K
R1691	Resistor	1K
R1692	Resistor	10K
R1693	Resistor	10K
R1694	Resistor	10K
R1695	Resistor	47K
R1696	Resistor	150K
R1697	Resistor	56K
R1701	Resistor	5K6
R1702	Resistor	5K6
R1710	Resistor	39K
R1711	Resistor	39K
R1718	Resistor	47K
R1719	Resistor	1K
R1725	Resistor	22K
T1010	Transistor	Bias resistor transistor
T1011	Transistor	Bias resistor transistor

T1012	Transistor	Bias resistor transistor
T1013	Transistor	Bias resistor transistor
T1014	Transistor	Bias resistor transistor
T1015	Transistor	Bias resistor transistor
T1016	Transistor	Bias resistor transistor
T1017	Transistor	Bias resistor transistor
T1018	Transistor	Bias resistor transistor
T1019	Transistor	Bias resistor transistor
T1020	Transistor	Bias resistor transistor
T1021	Transistor	Bias resistor transistor
T1022	Transistor	Bias resistor transistor
T1023	Transistor	Bias resistor transistor
T1024	Transistor	Bias resistor transistor
T1025	Transistor	Bias resistor transistor
T1026	Transistor	Bias resistor transistor
T1027	Transistor	Bias resistor transistor
T1028	Transistor	Bias resistor transistor
T1029	Transistor	Bias resistor transistor
T1030	Transistor	Bias resistor transistor
T1031	Transistor	Bias resistor transistor
TH1001	Thermistor	10K
VR1100	Trimming POT.	50K
VR1101	Trimming POT.	50K
X1001	Crystal	14.7456MHz
X1002	TCXO	13MHz
X1003	TCXO	16.8MHz

Panel Unit Layouts:



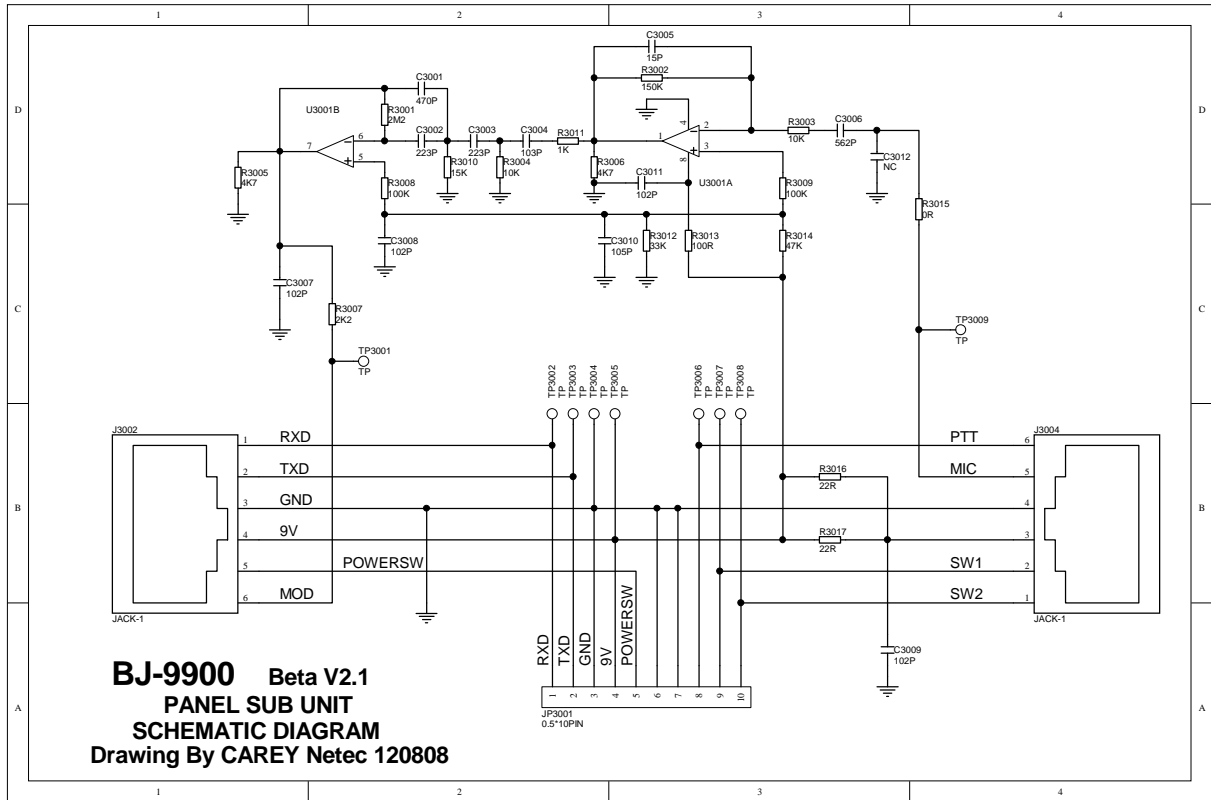
Panel Unit Parts List:

Designators	Name	Comment
C1292	Capacitor	102P
C1294	Capacitor	102P
C1297	Capacitor	102P
C1304	Capacitor	100P
C1307	Capacitor	100P
C1322	Capacitor	102P
C1333	Capacitor	102P
C1362	Capacitor	105P
C1376	Capacitor	102P
C1416	Capacitor TAN.	10uF
C1423	Capacitor	102P
C1425	Capacitor TAN.	10uF
C1485	Capacitor	102P
C1494	Capacitor	103P
C1689	Capacitor	103P
C1690	Capacitor	103P
C1698	Capacitor	334P
C1699	Capacitor	104P
C1700	Capacitor	334P
C1701	Capacitor	334P
C1704	Capacitor	473P
C1705	Capacitor	102P
C1716	Capacitor TAN.	10uF
C1720	Capacitor	180P
C1727	Capacitor	18P

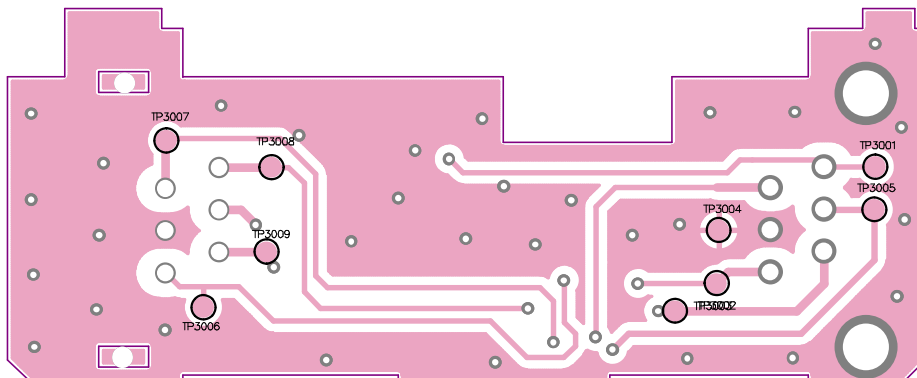
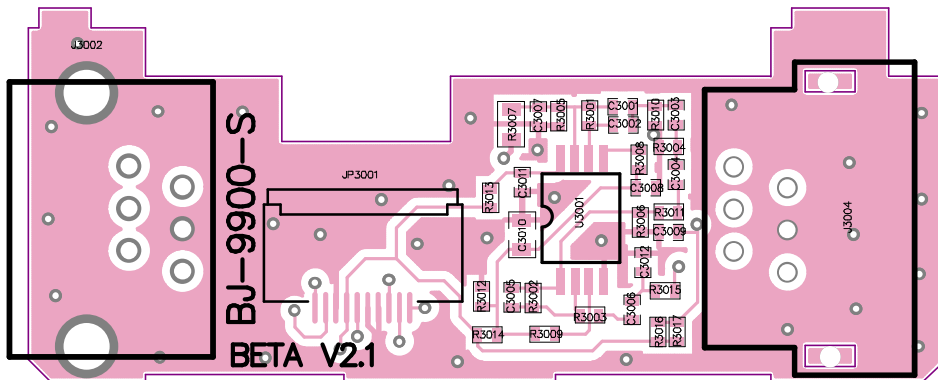
C1728	Capacitor	18P
C1731	Capacitor	100P
C1735	Capacitor	105P
C1742	Capacitor TAN.	10uF
C1744	Capacitor	103P
C1746	Capacitor	103P
C1747	Capacitor	104P
C1749	Capacitor	470P
CR1011	Crystal	32.768KHz
D1124	Diode	MA2S111
D1125	Diode	MA2S111
D1127	Diode	1N4148
D1128	Diode	1N4148
E1010	Capacitor TAN.	10uF
E1011	Capacitor TAN.	10uF
IC1042	IC	CPU
IC1043	IC	CPU
IC1045	IC	Power management IC
JP1012	PIN ASSY	0.5*10P
JP1015	PIN ASSY	0.5*7P*2B
JP1016	PIN ASSY	0.5*7P*2B
L1135	Inductor	Ceramic
L1137	Inductor	Ceramic
L1139	Inductor	Ceramic
L1141	Inductor	Ceramic
R1144	Resistor	4K7
R1165	Resistor	4K7
R1221	Resistor	4K7
R1257	Resistor	18K
R1258	Resistor	5K6
R1259	Resistor	100K
R1260	Resistor	22K
R1261	Resistor	22K
R1262	Resistor	100K
R1266	Resistor	18K
R1267	Resistor	0R
R1271	Resistor	100K
R1272	Resistor	100K

R1273	Resistor	100K
R1397	Resistor	10K
R1398	Resistor	100K
R1399	Resistor	30K
R1401	Resistor	10K
R1402	Resistor	100K
R1404	Resistor	4K7
R1405	Resistor	22K
R1406	Resistor	47K
R1521	Resistor	0R
R1536	Resistor	10K
R1674	Resistor	10K
R1705	Resistor	47K
R1706	Resistor	47K
R1707	Resistor	47K
R1708	Resistor	47K
R1712	Resistor	220K
R1713	Resistor	150K
R1714	Resistor	22K
R1715	Resistor	100K
R1717	Resistor	10K
U1100	IC	Reset IC
U1101	IC	Reset IC

PANEL-Sub Unit Schematics:



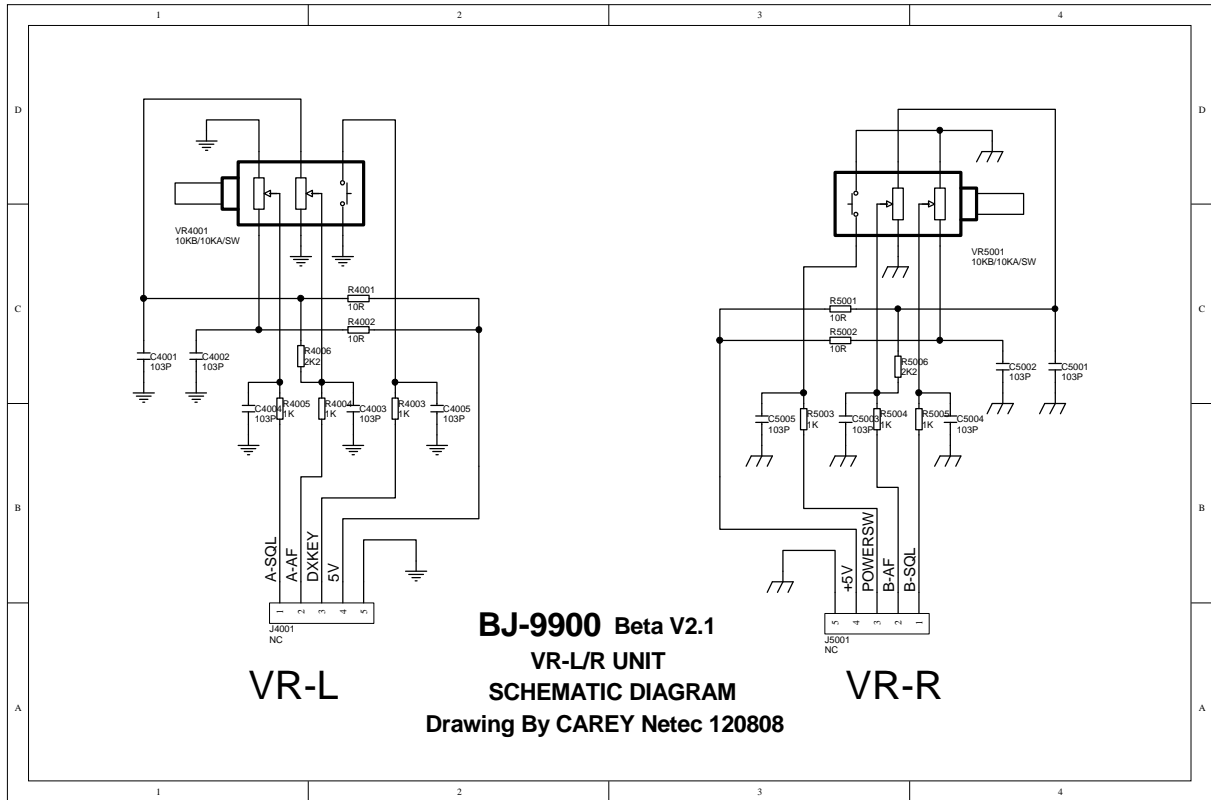
PANEL-Sub UNIT Layouts:



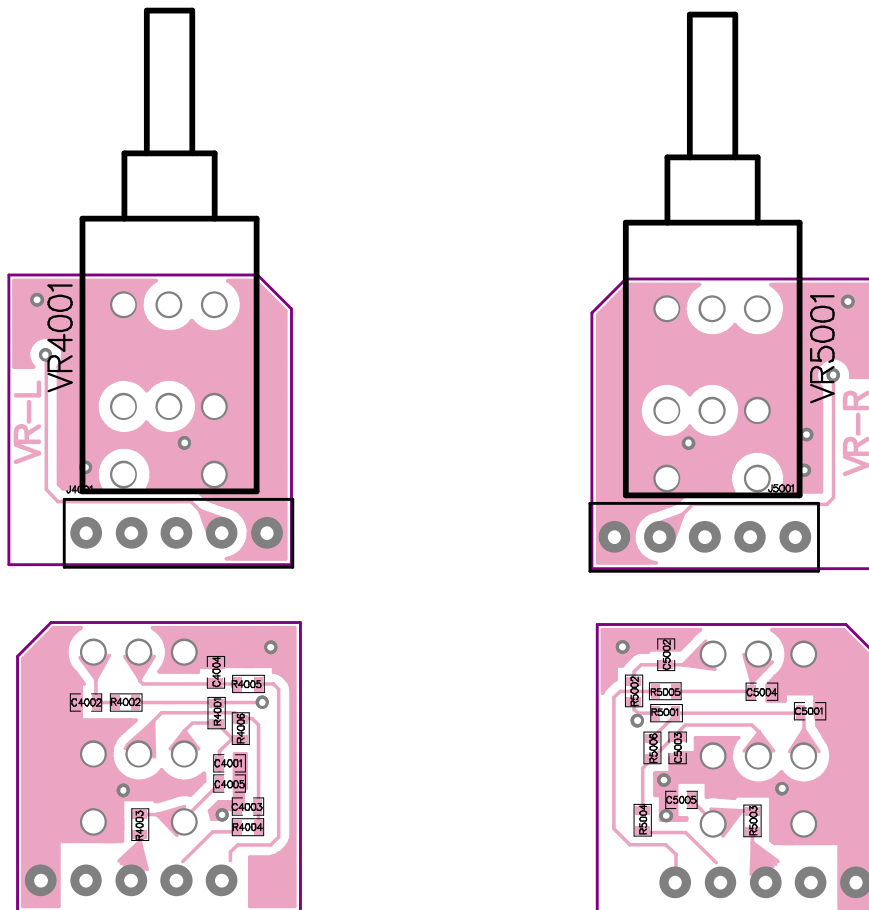
Panel-sub unit Parts List:

Designators	Name	Comment
C3001	Capacitor	470P
C3002	Capacitor	223P
C3003	Capacitor	223P
C3004	Capacitor	103P
C3005	Capacitor	15P
C3006	Capacitor	562P
C3007	Capacitor	102P
C3008	Capacitor	102P
C3009	Capacitor	102P
C3010	Capacitor	105P
C3011	Capacitor	102P
J3002	Modular JACK	
J3004	Modular JACK	
JP3001	PIN ASSY	0.5*10PIN
R3001	Resistor	2M2
R3002	Resistor	150K
R3003	Resistor	10K
R3004	Resistor	10K
R3005	Resistor	4K7
R3006	Resistor	4K7
R3007	Resistor	2K2
R3008	Resistor	100K
R3009	Resistor	100K
R3010	Resistor	15K
R3011	Resistor	1K
R3012	Resistor	33K
R3013	Resistor	100R
R3014	Resistor	47K
R3015	Resistor	0R
R3016	Resistor	22R
R3017	Resistor	22R
U3001	IC	Operational amplifier

VR-L/R Unit Schematics:



VR-L/R Unit Layouts:



VR-L/R UNIT Parts List:

Designators	Name	Comment
C4001	Capacitor	103P
C4002	Capacitor	103P
C4003	Capacitor	103P
C4004	Capacitor	103P
C4005	Capacitor	103P
C5001	Capacitor	103P
C5002	Capacitor	103P
C5003	Capacitor	103P
C5004	Capacitor	103P
C5005	Capacitor	103P
R4001	Resistor	10R
R4002	Resistor	10R
R4003	Resistor	1K
R4004	Resistor	1K
R4005	Resistor	1K
R4006	Resistor	2K2
R5001	Resistor	10R
R5002	Resistor	10R
R5003	Resistor	1K
R5004	Resistor	1K
R5005	Resistor	1K
R5006	Resistor	2K2
VR4001	Variable resistor	10KB/10KA/SW
VR5001	Variable resistor	10KB/10KA/SW

Specification

General Specification			
Frequency Range	Receiving	VHF:136.00 – 174.00MHz(144.00-148.00MHz) UHF:400.00 – 470.00MHz(430.00-450.00MHz)	
	Transmitting	VHF:136.00 – 174.00MHz(144.00-148.00MHz) UHF:400.00 – 470.00MHz(: 430.00-450.00MHz)	
	Receiving (Airband)	AM:109.00 - 135.995MHz	
Modulation	F3, F2		
Antenna Impedance	50 Ω		
Frequency stability	±2.5ppm @ -10℃ ~ +60℃		
Working Temperature	-20℃ ~ +60℃		
Operating Voltage	DC 13.8V (±15%), polarity negative ground		
Current	Receiving	0.5A (Standby)	
	Transmitting	8.5A (VHF) .8.0A (UHF)	
Dimension	140 X 41.5 X 168mm (Width *Height*Depth)		
Weight	About 1KG		
Transmitter		Receiver	
Output power	High: 40W(VHF:144MHz) 35W(UHF:440MHz)	Mid-band	38.55MHz/450KHz(Main band) 49.95MHz/450KHz(Sub-band)
	Low: 20W (VHF/UHF)	Circuit Type	Double recycling superheterodyne
Modulation type	variable inductance	Sensitivity	≤0.2uV (12dB SINAD)
Frequency deviation	±5KHz	Sensitivity	≤0.16uV
Spurious radiation	≤-60dB	Selectivity	8kHz/30kHz (-6dB/-60dB)
Microphone Impedance	2K Ω	Audio power output	2W @ 8 Ω 5%Distortion

Statement

This manual has been sought the correctness and completeness in the process of compilation of the content. Our company are not responsible for any possible omission and writing error. Our company will reserve the right to change the product design and specification the above parameters are subject to change without notice